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SPRING 2015

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4 Phases to Your Build

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Framing your self-build
Interior & exterior finishing
Groundwork & landscaping

Walk this way

Add the 'wow factor' with wood flooring

Also inside:

Connecting indoor & outdoor spaces with contemporary landscaping products

The right fit

Functionality, colour, materials – we look at the design options for different kitchen styles



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Front cover: Immix balustrade & Express Flooring from Richard Burbidge is ideal for domestic refurbishment projects, creating a stunning and contemporary style feature. See p.66

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Spring, with its warmer, hopefully drier weather, should be a good time for people on self-build and renovation projects to really get stuck-in and make headway on their builds. Ok, so with our weather patterns here in the UK it might not always work out that way, but hopefully there will be more fair days to get cracking with your projects in the coming months.

The Spring issue of Your Build is packed full of case studies, Top Tips, design ideas, focuses on materials and products, plus general advice to help you make the right decisions with your project.

In Question Time (p.26) Jenny Smith-Andrews of aircrete block manufacturer H + H answers our questions on structural materials and advises it's important to think about timescales, budget, Building Regulations, aesthetics, planning regs and how sustainable you want the project to be, but ultimately a lot of it comes down to preference.

Following on with the theme of structural materials, Graham Irving of Bovingdon Bricks (p.38), one of the few remaining traditional brickmakers using old-fashioned natural processes, tells Your Build it's vitally important for self-builders and renovators to take inspiration from the brick-making past in order to preserve our architectural heritage.

BuildStore's Rachel Pyne provides the key financial advice in the Spring issue of Your Build (p.15), so make sure you read her 5 Top Tips for sourcing the right finance which will help you clear a path through the vast amounts of often confusing information out there.

In our Insurance column (p.16) Paul Kempton of Self-Build Zone outlines the key do's and don'ts so you can make the right decisions when it comes to insuring your project.

Elsewhere in this issue we catch up with the Chitterman House project as it draws to a conclusion (p.62); Hina Lad of Warmup outlines why when choosing an underfloor heating solution it's so vital to get the insulation of your property correct (p.64); and in the third instalment of his series of articles on the self-build journey, Dennis Scarth of Jewson reaches the interior finishing phase and looks at why timber materials are such a popular choice for interiors (p.78).

So read on for all this and much, much more including Paul Joyner of Sustainable Building Solutions' thoughts on the growing popularity of biomass and what renewable heating systems can offer homeowners thanks to the RHI (p.07); Sara Corker of Sara Corker Designs looks at the key issues when designing a kitchen starting from a blank canvas (p.10); we take a look at the new courses from NSBRC for 2015 (p.21); and on p.22 we pull together some of the latest products and materials that might offer your project something different.

We hope you enjoy the issue and don't forget to let us know how your projects are progressing by emailing mdowns@unity-media.com.

Matt Downs, Editor



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These stylish self-build projects are both finished with PVCu windows and doors from Liniar...Surprised?

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Why biomass boilers are heating up demand for renewable energy



Paul Joyner, managing director of Sustainable Building Solutions (SBS), discusses the growing popularity of biomass and what the future holds for renewable heating systems now that the positive impact of the Government's Renewable Heat Incentive (RHI) is being felt across the domestic market

Following the launch of the Renewable Heat Incentive (RHI) for the commercial and now domestic market, which of course applies to homeowners and self-builders, there has been a significant uplift in interest around renewable technologies. This is especially strong in the biomass boiler market which has accounted for 42 per cent of domestic installation claims since the RHI tariffs were announced in April 2014.

The upswing in biomass affirms what we have seen in other successful Government schemes; a healthy return on investment really is the key driver, especially when it comes to the new and expensive technologies used within the renewables sector. With over 13,000 accredited installations registered at the end of 2014, the appetite for RHI is also anticipated to continue which will help to successfully improve efficiency

and growth across the whole renewables sector.

With all of these advantages and the backing of the RHI, biomass is moving closer to becoming a mainstream heating solution. Given that a biomass boiler has an average pay-back period of less than five years and provides a return of around 25 per cent, it's clear why it has become so popular. For instance, it is currently overtaking LPG and oil – especially in rural locations where there is no option to connect to the mains gas grid. RHI funding normally covers the cost of installation, so the boiler pays for itself whilst the end-user enjoys long-term savings on the cost of the fuel, which is up to 30 per cent cheaper than using gas or oil.

For the homeowner and the self-builder, it's important to check contractor credentials and always use those with MCS accreditations. MCS is an important standard of quality which an installer must have for the property owner to be

able claim the Government payments. MCS assessment covers the retrofitting of the building fabric, and the installation of the heat pump, biomass, or solar thermal technology so the homeowner can be sure that the installation will be as safe and efficient as possible, whilst being able to advise on the best renewable heating choice for each specific application.

Ultimately, the RHI has the potential to give an exciting upswing in the domestic renewables heating market and contractors are being positioned to respond to the demand. Whilst the scheme for homeowners is still in its early stages, it's exciting to see the level of investment that manufacturers, fuel suppliers, finance companies, and the Government are continuing to make, which can only be positive for the future of the industry and for biomass as a previously underutilised energy source.

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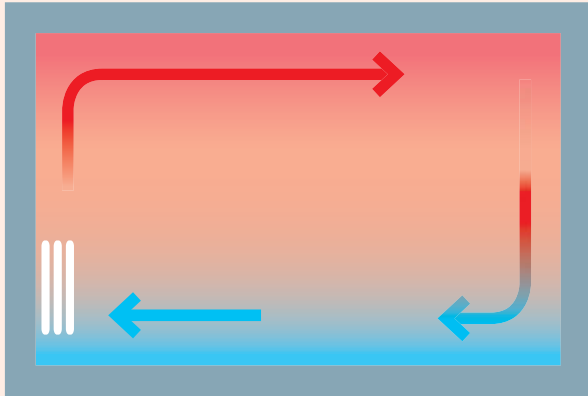


...is impossible to achieve with convection heating



Common forms of convection heating are wood burners, open fires, electric storage heaters and radiators.

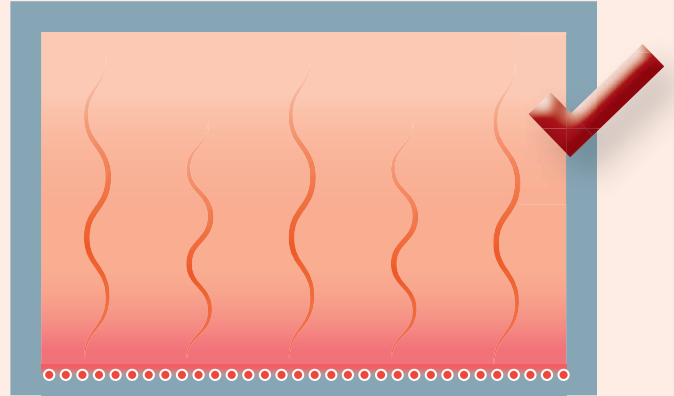
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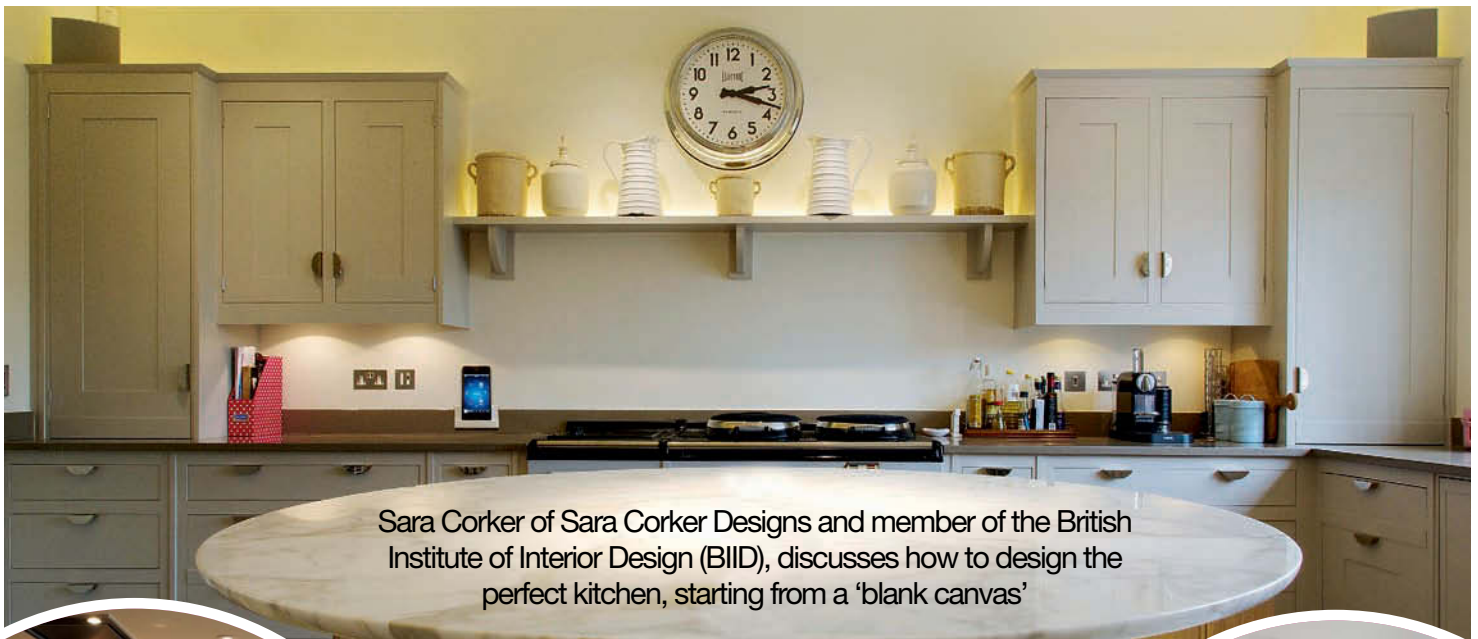
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DESIGNING A KITCHEN: Blank Canvas

When designing and building a kitchen, like with other rooms in the house, you have to consider the market you are designing for and often if you have a list of questions in your mind, you will be able to plan a better designed space.

So, some key questions to ask include:

How much time do you think you will spend in this room?

Direction of room/ when does the sun hit?

Have you got a particular style you like or are going for in your design?

What is your budget?

What type of flooring do you like?

What type of window dressing will be fitting for your kitchen design?

What type of wall coverings do you like?

Again the style that you are leaning towards will help you decide this

Timescale – how long have you allocated for building the kitchen?

Kitchens

There a few simple rules on how to make a kitchen feel more spacious which will help you enjoy using the space more. Make sure you have lots of lighting as getting rid of those dark corners will help provide a sense of space. Using light reflective units will give more light and a sense of space. Splash-backs instead of using tiles; use a continuation of the worktop and no breaks / joints. Some units have horizontal wood grains which will make the room look longer and vertical grains will make the space look taller. So if you have a small space for the kitchen you can make the room appear bigger.

Are you going to dress the room when finished? If so don't put too many utensils or items on the walls as this creates a pattern and visually makes the room feel smaller and cramped. Can the boiler be housed in a loft or utility room to maximize your space?

The heart of the home

Kitchens are often said to be the heart of the home and I have in my experience found this to

Main Image: Sound Environment, CEDIA Awards 2014 entrant, Best Integrated Home Under £100k

Left Image: SMC – Park House, Winner CEDIA Awards Best Integrated Home over £250k

be true. My family likes to cook and the best kitchens – or shall I say the more enticing and sociable kitchens – are the ones that are open plan, where everyone can gather for parties etc. The kitchen is often a hive of activity; food preparation and cooking and serving. The kitchen can also now double as a dining room – whether it is a quick breakfast or lunch on your own or a sociable evening meal with friends and family. Thus the kitchen becomes an exciting hub of activity. After all that excitement there is the clearing up, the loading of the dishwasher etc., so think of the look and feel that you want to create in this space. It is a good idea to make sure there is plenty of storage space, think of low space, high space and tall space for items like ironing boards.

By using earthy, rich and warm colours like browns, terracottas, golden-yellows, peach, ►

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About the author

Sara has been an interior designer for over 23 years. In that time she has worked on many interesting and varied projects. She loves designing blank spaces and specialises in dealing with storage, finding solutions and making a property really work for a client. Sara has written and taught courses from City & Guilds Accredited courses, NOCN (National Open College Network), and private establishments. Sara is currently finishing a book on interior design, due to be published later this year.



Above image: Isis Integrated Systems, finalist in CEDIA Awards 2014



apricot and red colours, coupled with the smells we find in the kitchen, this can really stimulate our senses giving inspiration to creative cooks. The experience in the kitchen should be an enjoyable one for the family – getting everyone involved is fun, so using colours that are mood enhancing and relaxing creates a cosy atmosphere and can help people unwind from a busy, stressful day. The rich warm colours mentioned earlier, set off with a fresh green complimentary colour reminds me of nature, and can give a feeling of relaxation, inspiration and contemplation. The colour green references plants and herbs, so instead of painting your walls green you could bring some green into the kitchen in the form of accessories, plants, fruits on display or flowers in yellow for an uplifting feeling – you can change the colours to suit the mood. Try to vary the colours of the units if you

are dealing with a bigger space, create texture and pattern with the units and counter tops through the materials you choose.

Many designers today opt for white kitchens, but what we sometimes don't realise is that the customers of these white kitchens don't actually cook, it is more of a fashion statement! The white kitchen looks very clean and tidy, clinical even – but it does not lend itself to being messed up – that's how it stays! In my view it discourages the aspiring cook – the colour is not relaxing, it can be cold and isolating, which means it discourages the person from using it. I feel the users will tend to eat out on a regular basis or use pre-packed and fast foods. That's fine if you don't like cooking but for those that do, I feel it's not a wise colour to opt for.

Flooring

For the flooring of your kitchen, I feel concrete is fun and has a lovely quality about it. Depending on budget and style, think of creative ways to blend the floor and units to work well together ■

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Top Tips: Self-build finance

By Rachel Pyne, group sales director, BuildStore

Embarking upon a self-build, especially if this is your first project, can be daunting enough without the added challenge of sourcing the right finance. So here's five top tips from BuildStore's Rachel Pyne.

Find An Expert

Before you head out to visit your local high street lender or building society, it's worth noting that the traditional routes of obtaining a mortgage simply may not apply. Building a house from scratch is a huge undertaking and it requires a more specialist approach. Where traditionally a house buying mortgage is released in a single lump sum, a mortgage for a self-build is released in stages, as the build progresses. In most cases, interest is only paid on the amount you have drawn down during construction.

All lenders have different self build criteria, so it's important to speak to an expert who can look at your project individually and find the right finance, both for your project and your personal circumstances.

"Chicken or egg?" – land or finance?

Finding land can be one of the most challenging aspects of self-build and it's easy to get carried away with your pursuit of that dream plot. But before you invest time and commit to a plot there are certain questions you need to ask yourself: Can you afford to purchase your plot outright? Will you need money to purchase the plot? Do you need to sell your current home first to release equity? What percentage of deposit is available to you? This is important to establish as some lenders don't lend on land, whereas others will – but with varying amounts – from say 50 to 85 per cent of the plot value.

Like the 'chicken and egg' scenario, at BuildStore we are often presented with the question 'do I find land first then apply for mortgage or vice versa?'. It can be extremely beneficial to carry out preliminary research into your ideal location on plot-finding websites such as www.plotsearch.co.uk which will also give you a good idea of plot prices, availability and your borrowing requirements. However, unless you have the funds to initially purchase land, until you have a mortgage approved you will not be in a position to secure that dream plot.

Budgeting & planning

To obtain funding, lenders will want to know how

much you estimate the project will cost. When it comes to your build costs, a rough guide would be – land 40 per cent of the overall cost of a project, but this does of course vary geographically. Materials and labour will account for a further 45 per cent and the final 15 per cent will be made up of insurances, professional fees, utility costs – items often overlooked causing a shortfall in funds. Using tools such as BuildStore's online build cost calculator will greatly assist in the budgeting of your build.

Make sure you factor in things like your ongoing living costs as these can also affect what funds you have available to put into your project, and indeed the timing of when you can input your own funds if you are relying on the sale of your existing property during the build.

A lender will want to see detailed plans for the property, projection costs and planning permission details. It's worth bearing in mind that this application process can take on average five months. You will have to be clear on all aspects of the project including the trades and materials being used. Factors such as build type (eg. timber frame, SIPs, etc.), construction method, materials, location and schedule of works can all impact which lend.

Find the right mortgage scheme for you

Your self-build mortgage will be as personal as your build project, so by utilising expert advice you will be able to determine which is the right mortgage scheme for you:

'Arrears Stage-Payment' mortgage: The



Rachel Pyne

Founded in 1998, BuildStore is the UK's leading provider of homebuilding finance and works with a panel of exclusive lenders to provide the most appropriate, individual self-build financial solution.

Contact

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traditional type of self-build mortgage is on an 'arrears' basis. The first payout during the build usually comes after the foundations have been completed (some products will only release after 'wind & watertight' stage) and a valuer has visited the site and signed off works. This means that you will have to find the money to get up to this point in the build (land purchase, materials and labour). This type of mortgage is best suited to those who have sufficient savings to fund the early stages of the build as well as sufficient savings for the deposit on the land.

'Advance Stage-Payment' Mortgage: not every self-build has funds to secure land or get to first build stage. With BuildStore's unique Accelerator Mortgage Scheme, money is released for each stage of the build at the beginning rather than the end of the stage giving you the cash you need to buy materials and pay your builder. It also lends a generous percentage of the costs – up to 90 per cent of the cost of the land and up to 90 per cent of the cost of the build. Accelerator is ideal for many situations, for example: if you have only a small amount of cash available and don't want to sell your existing house to release equity before your new one is complete; or you want to keep the cash you have available until later in the project to maintain a good contingency fund, or you are considering timber frame construction – as it provides the cashflow for the upfront costs such as manufacture, delivery and possibly on-site construction.

Review your rate

It makes financial sense to review your mortgage and financial commitments once your build is complete. The average end loan-to-value on self-builds is 58 per cent with the average cost-to-value being 72 per cent. Operating on a 'whole of market' basis, with access to all of the top lenders, as well as mortgages available on an exclusive basis, BuildStore can provide you with a level of expertise and knowledge not available by going direct to a lender ■

Insurance DO's and DON'Ts

By Paul Kempton, managing director of Self-Build Zone

Your home is probably the largest investment you will ever make and in most cases your most valuable asset; **LOOK AFTER IT!**
The first thing to remember once you have obtained any necessary Planning Permissions and have organised Building Control before you start doing work, is that **standard home insurance policies will not protect you against the risks you are potentially exposing yourself to...**

Whilst you can take out a site insurance policy to cover the new works and associated risks including liabilities, you also need to make sure that the parts of the house that you are not working on, sometimes referred to as the 'existing structure', are also covered. The minimum cover should be against the risks of fire, theft, flood, storm damage, vandalism and accidental damage.

Specialist self-build site insurance is usually a type of package insurance policy specifically designed to cover the existing structure, new works, public and products liability, employers' liability, own tools, any hired-in plant and equipment, tools, site huts / residential caravans, limited personal possessions, personal accident, and also usually some limited provision for cover for employees' tools and personal effects.

REMEMBER YOUR RESPONSIBILITIES: Each year more than 50 people are killed and thousands injured, with small building sites accounting for 75 per cent of these incidents...

If you as the self-builder employ workers or members of the family, you need to have Employers' Liability Insurance by law as you have a duty to control the risks that arise from the construction works.

You have a legal requirement to assess your Health & Safety responsibilities as a self-builder under the Construction (Design & Management) Regulations 2007 (CDM)... seek advice if unsure.

REMEMBER: You may want – or your lender may insist on – a **10 year Structural Warranty policy** to protect the new works that have been done. It is important that this process is put in place at the start of the works to make sure that any audit requirements for the policy are met during the works.

DO make sure that you get the right insurance cover in place and check what insurance cover your builder or tradesman actually has in place.

REMEMBER: DO NOT expect a builder or tradesman's policy to cover loss or damage to the existing structure or new works, and neither will it cover your liabilities as the owner of the property and site.

Make sure that you see evidence of any policy that they have and keep a copy if possible.

DO NOT trust what they say – only what you see.

REMEMBER: To succeed in an action against your builder, tradesman, supplier or professional you will need to prove Breach of Contract / Negligence against them which can be a lengthy and very expensive process.

Legal expenses insurance is always useful to have in cases of contractual problems, but remember in most cases this is not an open chequebook to cover all legal fees and expenses that you care to incur as there will be conditions – one of which will be the ability to prove that a



contract was in place (and this applies to Professions, Trades and Suppliers alike). Simple Contract Forms are available to use.

Other things that you need to consider:

When it comes to building Extensions or Conversions where the 'footprint' may change, please remember that the **Party Wall Act** may come into operation if you are undertaking works within 3 or 6 metres of a party or boundary wall.

In simple terms, your neighbour has a right to be compensated for any loss or damage caused by your relevant works.

DO NOT rely on your Builder's Public Liability Insurance to provide protection. It is quite likely that the works you are carrying out could cause damage to the neighbouring property, and if you're extending your property there is a risk of undermining your neighbour's foundations. There may be a real possibility of causing damage.

DO make sure you have Party Wall Liability to cover your contractual liability where you have a Party Wall Agreement in place.

REMEMBER: You may also need JCT 6.5.1 (non-negligence) cover which provides protection against your liability for loss, damage (or proceedings that arise due to non-negligent damage to third party property) while undertaking building works due to: collapse, subsidence, heave, vibration, weakening, removal of support or lowering of groundwater.

If in doubt then seek the advice of a suitable professional ■



Paul Kempton

Paul Kempton is the managing director of Sennocke International Insurance Services Ltd which includes the trading styles Self-Build Zone and Build-Zone. Paul has over 40 years of experience in insurance including Lloyd's

markets, leading to the decision to start his own insurance brokerage. Sennocke has been operating for 24 years with strong market reputations in the Commercial, Building and Personal lines Insurance markets.

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The Age of Fibre cement Cladding

Making the exterior of a home look distinctly different and aesthetically appealing isn't easy, yet it's what most self builders and renovators strive to achieve. And, when you've created the desired look, the last thing you want is to be faced with years of ongoing maintenance. There are other factors to consider too, for example, new homes need to be thermally efficient and have a reduced carbon footprint. And, of course, throughout it all, the cladding needs to look right on the building and within its surroundings.

With so many factors to consider just for the exterior, selecting the right product can present challenges!

It you look at it in terms of overall benefits, fibre cement

CEDRAL REVAMP INSPIRES

Marley Eternit has added 8 inspirational new colours to its Cedral weatherboard range, which now totals 23 colours. These are presented in Earth, Mineral, Ocean and Forest colour families.

Being responsive to market needs in this way has helped Marley Eternit establish itself as the market leader in fibre cement cladding in the UK.

Improvements to the range also include the introduction of Cedral Board, which reflects the fact that the product is increasingly being used alongside Cedral as a fascia and soffit board.

Cedral Board is available in the 9 best selling Cedral Weatherboard colours.

weatherboard – and we particularly like the 2015 range just unveiled by Marley Eternit – makes a lot of sense.

Instant aesthetic appeal that recreates the look of timber, combined with low maintenance, and you soon begin to see why more self builders are going down the fibre cement weatherboard route. Here we take a look at some of these benefits in detail:

1. Instant kerb appeal

Visitors to any self build home form an instant impression of the property, the quality of build and values of its residents, simply based on its outward appearance. The important thing to remember here is that some materials look great when they are new, but soon begin to show signs of age.

Cedral Weatherboard avoids this because its made from fibre cement so it keeps its looks over the long term. Aside from that, it provides a cost effective method of adding a real wow factor to any self build project or, alternatively, giving an existing home a facelift, making it look like new in the process.

The subtly textured surface on Cedral weatherboard makes it look just like timber. It can be supplied in a Natural finish for site painting, or in a range of 21 factory-applied solid colours and two woodstain finishes - providing sufficient choice to suit all project requirements.

2. Reduced maintenance

Cedral weatherboard is ideal for use where there is likely to be ongoing issues with painted timber. Marley Eternit has extended



these low maintenance benefits to other elements of the external facade by introducing Cedral Board. This is available in the nine best selling Cedral weatherboard colours to ensure a perfect colour match and can be used for exterior window and door surrounds as well as vulnerable roofline areas such as soffits and fascias.

Introduction of Cedral Board creates a complete system solution and addresses the issue faced by many homeowners of constantly having to maintain the exterior of their property.

3. Easy to fit

If you're looking for a no-hassle product, they don't come much easier to fit than Cedral. The boards can be cut, screwed, nailed or glued just like timber. It has an installed life expectancy of at least 50 years – giving you a long term solution.

4. Environmental choice

Fibre cement Cedral weatherboard can achieve an A+ rating as defined in the Building Research



Establishment's (BRE) Green Guide to Specification based on generic rating for autoclaved fibre cement (calcium silicate) cladding - (Element Ref: 806220701, 806220675, 806220676).

That means if you are building to a reduced carbon footprint, or even zero-carbon standard, Cedral is a proven environmental choice.

5. Upgraded thermal performance

If your home was built before the 1960s, chances are it won't have much, if any, insulation.

An effective way of achieving a thermal upgrade, and with it reduced heating bills, is to install a rainscreen cladding insulation system using Cedral weatherboard. This is relatively straightforward and involves fixing rigid insulation to the exterior of your home, before cladding it with the fibre cement boards.



6. More choice

As part of its ongoing investment in product development and responding to consumer demand, Marley Eternit has added 8 inspirational new colours to the Cedral weatherboard range, which now totals 23 options. The new colours were selected following an extensive research programme with self builders, homeowners and housebuilders, along with current and emerging trend analysis, to create a range that is sure to inspire. The new colours are presented in the Earth, Mineral, Ocean and Forest colour families.

Until relatively recently, there was a tendency to stay with the proven elegance of neutral colours such as white, grey and black on the exterior of a property. However, not anymore! With an extended colour range, self builders are now choosing stronger, bolder colours that create an uplifting, engaging aesthetic and which sets the tone for the interior design scheme.

The future

The latest improvements by Marley Eternit create a complete Cedral system solution including Cedral Board, complementary trims and an up to date colour palette.

That's important because if there is one single factor that can transform a self build project from the ordinary into the extra-ordinary, it is the exterior of the building. Stands to reason as it's the first thing that people notice when they visit a property. Don't underestimate the power of curb appeal!

One of the best decisions a self builder can make, therefore, is to invest in high performance, low maintenance fibre cement weatherboard. It provides an effective way to create homes that are distinct and appealing, whilst ensuring they remain sympathetic with its surroundings. As self builders embrace the challenge of creating visually pleasing homes that retain an element of



difference, more are opting for fibre cement weatherboard.

The new 2015 Cedral colour palette is showcased in an inspirational new downloadable brochure that is available on line at [www.weatherboard.co.uk]. Alternatively, customers can order colour samples by calling: 01283 722588.

TOP TIPS:

- Cedral weatherboard can be used to create a stunning new build property, or to upgrade an existing home.
- You can clad your entire house in Cedral weatherboard to create a New Hampshire style home, or just a feature wall to add interest.
- Once fitted, Cedral weatherboard doesn't need re-painting – it's supplied factory-finished - so it's great if you want to avoid continually having to paint exterior timber!
- Cedral weatherboard gives a traditional look by fitting the boards in an overlapping 'shiplap' configuration or, for something more contemporary, a small gap between the boards creates interesting shadow lines.
- Fit fibre cement Cedral Board on soffits, fascia and window reveals to create a perfect colour matched finish to your Cedral weatherboard.

For further information on our range of products and services just ask ME at

www.marleyeternit.co.uk/cladding or call ME on 01283 722588. You can also follow ME on Twitter @MarleyEternit. If it matters to you it matters to us, that's why with ME it's all about you.



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Your Build hears about some of the courses on offer at the NSBRC in 2015

SELF-BUILD COURSES

The key to creating your dream home!

The National Self Build & Renovation Centre (NSBRC) is unique with no other venue like it in the UK. It offers free and impartial advice designed specifically to ensure self-builders, renovators and homeowners looking to add space and value to their existing homes, make the right choices during each step of their projects. The NSBRC is easy to get to (at Junction 16 of the M4 with plenty of free parking) – and since opening in January 2007, almost a quarter of a million people have visited the Centre seeking independent building advice and support.

You can walk through educational tours, featuring life-size exhibits showing the latest building systems and technologies, and browse the 'Trade Village' which features thousands of products from over 200 exhibitors. With a full calendar of events, shows and conferences, covering a wide range of topics and themes throughout the year, there is everything you need for your project under one roof!

Neil Davey, NSBRC technical expert, explains: "Our aim is to inspire, educate and provide impartial advice for our visitors so they can make well informed choices during their projects. With the Spring bringing warmer, drier weather it is always a busy time for people with building projects. Our self-build courses are perfect for anyone looking to buy, or already owning, a plot who may be seeking advice or reassurance before making what can be expensive decisions and to help avoid costly mistakes."

Held every other month, the NSBRC has run its 3-day self-build course for over eight years and places always sell out.

Covering 11 topics in total, the courses take the form of informal workshops and make use of the superb practical exhibits available in the Centre to provide attendees with a level of knowledge which guarantees their projects will go more smoothly. Neil continues: "We have helped hundreds of self-builders save thousands of pounds on their build costs and have received some great customer feedback" ■

Customer comment:

"I have just completed the Self-Build Course. Absolutely excellent 3 days, well worth the money with lots of useful facts, advice and food for thought"

3-day Self-Build Course

THE 2015 COURSE DATES ARE:

Sat 9th – Mon 11th May
(limited availability)
Sat 11th – Mon 13th July
Sat 5th – Mon 7th September
Sat 7th – Mon 9th November

A place on the course costs £375 inc VAT with a reduced cost of £345 if you pay before four weeks of the course start date. Included in the course are comprehensive course notes, a writing pad, a pen, buffet lunch and refreshments.



1-day Project Management Course

Brand new for 2015, the NSBRC has launched a 1-day Project Management Course.

Mike Hardwick, course Author & Presenter explains the benefits of taking this course: "For most self-builders and renovators, their project is a one-off build, therefore unique. The resource, in the form of the budget is finite and must be managed. Failure to grasp this concept leads invariably to a stressful build and, in the worst cases, failure when the money runs out. Every self-build project will need to be managed, but there are no hard and fast rules as to who does it. Project management sounds scary and difficult to some, but often without realising it,

we undertake project management in our daily lives, be it a work project, organising an overseas holiday or major events such as a family wedding. We are more familiar with these scenarios because we know what is involved and the processes are more understandable. Construction is more daunting because few people actually know the detail and sequencing of what goes on during a house-building project, and it is that which makes it seem more difficult when in fact, the principles are very similar."

This course covers a huge amount in one day including: Budgeting to Build Systems, Scheduling & Site Prep, to claiming back VAT.

THE COURSE RUNS ON A SATURDAY AND THE 2015 DATES ARE:

11th April
30th May
1st August
3rd October
5th December

A place on the course costs £150 inc VAT. Included in the course are comprehensive course notes, a writing pad, a pen, buffet lunch and refreshments.

More details can be found on the NSBRC website: www.nsbrc.co.uk or by calling on 0845 223 4455



Express flooring launched

Stair part specialist Richard Burbidge has entered the flooring market with its new Express Flooring range, featuring a variety of flooring finishes and accessories to suit any home.

The new range is inspired by current trends within the home improvement market and has three systems: solid, engineered and laminated. For the premium finish, Richard Burbidge says solid wood provides unbeatable aesthetic appeal, and provides robust flooring in busy areas, such as hallways and living rooms. With a variety of board widths, lengths and finishes – including White Oak and Butterscotch Oak – solid wood floors can give years of service and pleasure with the added bonus of their suitability for sanding and refinishing should the need arise. Engineered wood flooring benefits from the natural beauty of real wood combined with the hard-wearing durability of a multi-layered construction, providing years of use and easy maintenance. Laminate flooring is the ultimate cost-effective option for homeowners wishing to install beautiful flooring on a budget. Suitable for all rooms in the home, this range is versatile and practical, and is available in a variety of Oak finishes.

A range of high quality profile trims and accessories are also available to make installation as quick and simple as possible, as well as ensuring that the flooring project is finished to the highest possible standards.

W: www.richardburbidge.com



Shaws traditional design 'always in vogue'

There are three sizes of handcrafted sinks in the Shaws of Darwen Classic Butler family, ranging from 600mm to 1000mm. All Shaws sinks are designed, created and made in Britain and manufactured from the finest fireclay ceramic. They are designed to look and feel cool to the touch and beautiful to look at. The three heavyweight Butler sinks are of a deep Victorian style and feature a round overflow and central 3½" waste outlet suitable for basket strainer or waste disposer, and are produced with a durable glaze designed for years of usage.

Shaws says its traditional style sinks, like the Butler, are always in vogue – they never go out of fashion and they complement all styles of kitchens, whatever the design and decor. They are suitable too, for use in utility rooms. The largest of the sinks is a good size for cleaning big pans and oven grids as well as being able to 'wash the dogs' after muddy walks. Due to their weight it is recommended that bespoke cabinetry is in place prior to installation.

All of the sinks are available in white and biscuit colourways and are both acid and alkaline resistant. They are all hand finished and each sink is signed with the impression of its craftsman maker and delivered with a certificate of authenticity, verifying the product's handmade quality.

W: www.shawsofdarwen.com



Render colour-matching

Sustainable building systems company Limetec has introduced a full colour-match service for its range of Baunit decorative finish render products.

Following investments in its Oxfordshire manufacturing facility's new tinting set-up, Limetec's full colour-match service allows customers to choose from one of the 888 standard colour offerings or to create a bespoke shade to best match their specific building's requirements.

Roger Shroff, Limetec Mortars & Renders sales and technical executive, said: "Our new colour tinting set-up now means Limetec customers have an unrivalled choice of colour-matching options for Baunit's render finish products, allowing them to select the perfect shade for their individual project."

Limetec's partnership with lime based breathable renders manufacturer Baunit brings all of its eco-friendly render products to the UK market, which are ideal for conservation / renovation projects, historic buildings, new homes and self-build applications.

Limetec is now also offering the full range of Baunit Nanopor Top top-coat renders. Nanopor Top is a décor render finish for external use that is self-cleaning, pollutant-resistant and comes ready to use. Baunit's new 'photokat' technology uses a photocatalyst process to break down and dissolve any organic dirt particles, which are then removed by wind, rain or evaporation.

W: www.limetec.co.uk



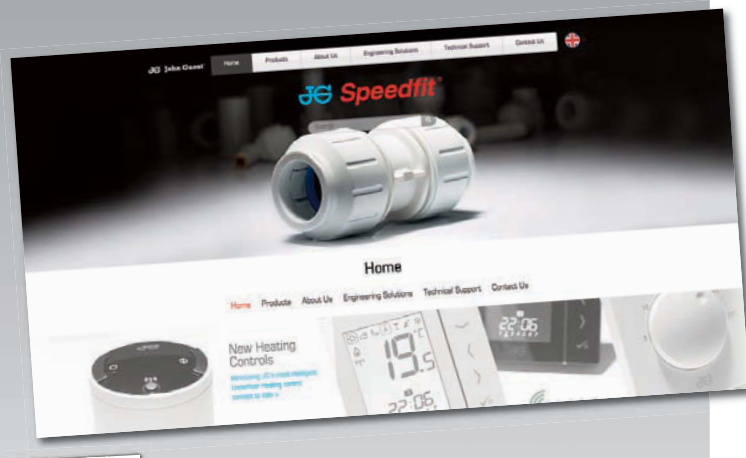
JG Speedfit offers installer ease with new site

JG Speedfit has announced the launch of a brand new website, which was designed to give a particularly visual focus on the functionalities of the brand's product ranges.

The new speedfit.co.uk website is now easily accessible from a mobile phone or a tablet and is full of installation videos, showing how to best use JG Speedfit's products.

The company says the new website reflects its philosophy of making the life of the installer a lot easier, as the website now has more examples of best installation practices, technical advice and product specification.

W: www.speedfit.co.uk



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MY HOUSE

Black Millwork to exhibit at NEC

Black Millwork will be showcasing its full range of fenestration products, plus highlights from its Andersen portfolio, on stand D179 of the Homebuilding and Renovating Show, at the Birmingham NEC from March 26-29.

Incorporating timber framed, aluminium and aluminium clad windows and doors, Black Millwork's range offers both contemporary and traditional styles for modern developments and classic renovations. Taking centre stage will be a selection of products from the recently launched aluminium range, which Black Millwork says achieve exceptional performance ratings and offer a sustainable specification choice.

Delivering U-Values as low as 0.7W/m²K, the aluminium windows are available in a variety of RAL colours and bespoke shapes and sizes, and are virtually maintenance free throughout their long life span.

Gary Hutton, general manager at Black Millwork, said: "The Homebuilding and Renovating Show is always a highlight for us and we're pleased to be back at the NEC event again this year. We had a fantastic response to our new aluminium range last year, which we developed in direct response to customer feedback requesting more contemporary styles."

Also on display will be Black Millwork's high performance Urban Sliding Sash windows; its range of high specification 68mm engineered timber entrance doors; a range of fenestration choices, including its oak casement, flush casement and tilt and turn windows; and a selection of products from its Andersen Windows portfolio.

W: www.blackmillwork.co.uk

**Easy to use website**

Jewson has launched a new-look kitchens website, optimised for smart phones and tablets, as part of its ongoing commitment to improving the online customer journey.

The new-look website provides visitors with a better browsing experience thanks to its focus on simplicity. The search process allows users to filter by colour, price, finish and brand – providing more flexibility and improving the overall user experience. Returning users can benefit from a log-in area where they can document and save their kitchen preferences. It also offers helpful reminders of the practical and aesthetic finishing touches associated with a kitchen purchase, as well as recommendations based on what has been previously viewed.

Across the website, bigger and bolder images are being displayed, along with larger buttons with clear colour contrasts to ensure accessibility of information. The site is also responsive, scaling up or down dependent on the device used, for easy-reading and improved navigation.

Gareth Drew, eBusiness marketing manager at Jewson, said: "We have seen the use of mobiles and tablets steadily increasing from our website visitors. This new-look responsive site aims to provide users with a better overall experience from Jewson, and forms part of our ongoing strategy to invest in our digital channels."

W: www.jewsonkitchens.co.uk

**Add Elegance to a project with JELD-WEN**

JELD-WEN says its made to measure, flush-sash timber windows can add a touch of character to any renovation project.

Available in a wide range of designs including cottage, horizontal bar or bay windows, the new Elegance window fills the gap between contemporary, conservation and more modern looking windows.

Not only does the new range meet Part E and L legislation, it also offers A energy rating options and U-Values down to 1.3 W/m²K. Elegance is available factory-finished in any RAL colour and with options for dual colour, customers can specify one colour for the exterior and an alternative colour for the interior to match the décor – all with up to ten years guarantee on the paint finish.

The Elegance window also benefits from a multi-point locking system with the option to fit a monkey tail handle and mock stay for a traditional appearance.

The range is supported by JELD-WEN's ten year manufacturing guarantee against defects, its 40 year rot and fungal attack guarantee and a hardware guarantee of ten years.

W: www.jeld-wen.co.uk

**'Revolutionary' divider set from Climadoor**

Climadoor has launched a new room divider door called the FrenchFold, which it has called "revolutionary".

These doorsets offer the benefit of bifold doors, where the doors fold to open up all the space available, but also with central opening doors. Climadoor says they are ideal for those with furniture layouts which make it difficult to install standard bifold doors with daily access doors at the wall. These FrenchFold doors have the additional benefit of being able to be folded back completely against the adjacent walls.

Offered in three door and four door systems in a range of sizes from 1680mm wide through to 2830mm, the FrenchFold divider door is available in fully prefinished oak, unfinished oak, or white primed to suit your specific taste.

W: www.climadoor.co.uk



New additions to the DG Fires selection

A new collection of wood fire inserts with built-in ventilators to boost performance has been launched by DG Fires. The new Instyle and Prostyle V models are designed to be installed into an existing brick chimney or connected to a steel flue. In addition to the radiant heat generated by the burning logs, homeowners can activate the ventilator in order to heat up the room more quickly and enhance the comfort of the fire. The ventilator generates warm air, which is distributed through the openings in the front of the fire. There are four adjustable ventilator settings and the mechanism is powered by a 12v electrical connection. The new models have the option of external air connection, which facilitates cleaner wood burning and an energy efficiency rating of more than 80 per cent. They have also been awarded DEFRA approval for use in UK urban smokeless zones, making them amongst the most environmentally friendly wood fires in the country. The fires range in size from 600 to 1000mm wide, and there are two types of optional outer frames – Classic Line and Modern Line – which DG says lend the fires a more distinctive look. All elements of the fires are also easily accessible for routine cleaning and maintenance.



W: www.dgfires.co.uk

DG Prostyle 600 V insert wood fire

'Quietest fan on the market'

Airflow Developments has launched iCONstant to meet demand in the housing sector for Decentralised Mechanical Extract Ventilation (dMEV) fans. The Airflow iCONstant is a continuously running axial fan using an electronic flow sensor to ensure that installed performance is maintained and that adjustable air flow rates remain constant. There are two models available; on the Timer version, the boost speed is set to run for between 15, 30 or 45 minutes. With the Humidity Timer version, an intelligent humidity sensor will activate the boost speed when a set point is reached – and this can be adjusted between 60 and 90 per cent. When the set point is reached after the boost speed kicks in, the fan will revert to the trickle speed once again. The fan can be both wall and ceiling mounted in a bathroom, kitchen or wet room, whether it is a new build or retrofit, and achieves "sound levels below what you can hear" according to Steve Bergh, category product manager for Airflow. It also has a 'Self Proving' diagnostic sequence, which automatically checks the functioning of the fan. The fan is also economical to run, providing annual running costs of a little over £1 per year when used on its lowest speed. iCONstant is fully compliant with Approved Document F, System 3 of the Building Regulations due to its everyday running rate which can be adjusted up from the minimum high trickle ventilation flow rates to the maximum speed of the fan, dependent upon the total flow rate of the dwelling.



W: www.airflow.com

One-stop shop for self-builders and improvers

Kloeber UK offers a full range of bifold doors in timber and aluminium and advanced glazing solutions in timber, aluminium, composite and coloured uPVC. The company's product portfolio includes complementary designed sliding doors, windows, glazed screens, French doors, contemporary and traditional entrance doors, single doors, room dividers, glazed screens, fixed panels and rooflights. Kloeber says it is a one-stop shop for the self-builder and home improver and can provide technical consultations, surveys and a full installation service if required – all backed up by the Kloeber Warranty.

W: www.kloeber.co.uk



Extended range offers huge amount of styles

Lister Trade Frames has unveiled its extended Dual Rebated Composite Gallery Door range, adding to the original series launched in 2006. The original Gallery Door's selling features revolved around its construction, which included steel reinforced sections with no use of timber. It was a 68mm slab compared to the 44mm standard on composite doors and was dual rebated, combining the weatherproofing, installation and thermal elements of the PVCu door with the added strength, security and solidity of a Composite product. Listers also added Secured by Design locking as standard for extra peace of mind. Commenting on the original launch, Phil Warren, sales director for Listers, said: "There were some initial restrictions, not least the fact that there were a limited number of styles. We were only able to offer 12 variants and although this served us well for a number of years, as the market and tastes changed, we needed to expand that range and add more features." The new generation of doors has been developed alongside Halo and offers a new range of possibilities. Mr. Warren continued: "The options are incredibly exciting and we now have a huge amount of styles to choose from. Not only that, but we are now offering any RAL colour to either side of the frame and slab, as well as a very impressive selection of contemporary hardware. The new styles are so varied and modern, they're already attracting a new customer base."



W: www.listertf.co.uk

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MY HOUSE

Jetmaster offers warmth and efficiency

Jetmaster says its stoves have brought the warmth and romance of fire into over a million homes since 1951, and today can still give homes a welcoming warmth that cannot be compared to a gas or electric fire. Through the colder months, a Jetmaster wood and multi-fuel stove can colour a home with tones of glowing warmth as well as providing fuel efficiency of up to 86 per cent, releasing heat into the room instead of up the chimney. Jetmaster inset stoves carry a focused, clean line appearance. The main design element is the face of the stove, featuring a large glass window. Each stove is built in the UK according to rigorous quality standards with a five-year guarantee when registered. Crafted in Hampshire, these are British made stoves designed for British homes.

W: www.jetmaster.co.uk



Underfloor Heating Store calls on self-builders

The Underfloor Heating Store is calling on all those planning a new build, extension or major refurbishment to visit its showroom and consider underfloor heating as an efficient way of heating.

The company says underfloor heating is growing in popularity, due to its relatively cheap installation and running costs. It also frees up wall space – normally dedicated to radiators – and can now be installed under virtually any type of floor. It is also generally considered to be more eco-friendly than radiators due to the way it heats the space.

The Underfloor Heating Store also supplies wet rooms, solar PV systems and air source heat pumps, and its qualified technical team can design and quote a system directly from a customer's plans. It has supplied and installed thousands of systems nationwide, experienced coverage in the national press and even appeared on Channel 4's "The Home Show" and BBC's "DIY SOS".

The company's showroom in Basildon gives buyers the opportunity to examine each type of heating system, offering cut-away examples of every type of underfloor heating system to illustrate the easy installation methods. It also has a wide range of thermostats and controls on display, including fully networked systems that can be controlled via a smartphone or tablet.

W: www.theunderfloorheatingstore.com



Contemporary windows

EcoHaus Internorm is synonymous with quality and sets the pace and standard for stunning contemporary windows and doors. From minimal framed large-scale lift & slide systems, to stunning Aluminium Clad Timber Composite contemporary styled windows, we simply offer clients an unrivalled breadth of contemporary products.

The external Aluminium Clad is available in any RAL colour and the internal timber can be finished in a range of contemporary neutral and subtle stains or washes. EcoHaus Internorm windows are both high quality, high performance and are used by Architects effectively to contribute to the overall building's visual aesthetics. Contemporary building designs often call for minimalism. Why create large amazing glazed areas and then clutter them with curtains and awkward face mounted blinds that become dust traps? EcoHaus Internorm has a unique, contemporary and minimal solution to the necessary privacy and shading dilemma. EcoHaus Internorm provides the perfect solution by providing integrated blinds within the window system in a sealed dust-free environment. These are also available with a Solar Powered PV option, which is capable of closing blinds on five windows simultaneously, using a remote control or a house full using the Internorm App.

W: www.ecohausinternorm.com



Underfloor heating solutions from Nu-Heat

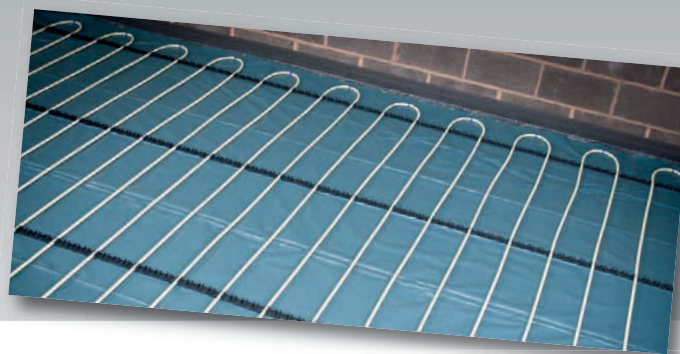
Nu-Heat says virtually any project can now enjoy the benefits from underfloor heating (UFH) – whether you're building from scratch, looking to install UFH on the ground or first floors, extending or converting – thanks to its extensive range.

Nu-Heat's screed UFH system is an affordable solution for ground floors that's easy to install as part of a new-build. The company says it's also the perfect partner for eco-friendly heat sources, such as a heat pump, as it uses far lower flow temperatures than a radiator.

Timber joisted upper floors, which are common in new-builds, can also benefit from UFH with ClippaPlate, a patented lightweight aluminium plate solution that is fitted from below – before ceilings are up – or over joists before laying the floor.

With every system, Nu-Heat provides a bespoke design based on heat loss calculations for each room, meaning the system can perform in any setting.

W: www.nu-heat.co.uk



www.marleyeternit.co.uk/myhouse

Question Time

Think about the

BUILDING BEFORE

building begins

Jenny Smith-Andrews, of aircrete block manufacturer H + H, answers our questions and advises it's vital to think about how to build your house before getting carried away with the aesthetics

YB: What are the key considerations self-builders should take into account when deciding what materials to use in the construction of the house?

It's often the case that the actual build materials are the last thing to be considered because everyone involved in the project gets carried away thinking about the latest kitchen gadgets and how the bathroom will look, which is funny given that without the walls around you there is no house!

Before deciding what building materials to use, builders and homeowners need to primarily think about timescales, budget, Building Regulations, aesthetics, planning regulations and how sustainable the homeowner would like the house to be.

However, a lot of it comes down to preference. The preferred house-building materials in the UK are masonry materials. Masonry gives homeowners a feeling of solidity and reliability that doesn't always come from lightweight frame structures. It is not unknown for homeowners to go around knocking walls with their fists – the idea behind this is to see how solid or otherwise a wall is. This is important when it comes to common household tasks such as hanging shelves and heavy mirrors.

YB: For self-builders time is often of the essence. How long does it take to build the shell of a house using H + H materials?

It can take as little as a couple of days. There are many aspects of our products that help speed up the build process. Aircrete blocks alone are much lighter in weight than dense concrete blocks meaning it is easier and quicker to manoeuvre them around site. The real speed however comes when you consider the mortar and the size of the blocks. H + H blocks come in a wide variety of sizes. Our Jumbo Bloks and Multi Plate blocks

are large format which helps with the speed of building. Multi Plates are over twice the size of a Celcon Block helping significantly to speed up the build process.

We have our own build system called Thin-Joint and this refers to the mortar thickness between the blocks which is virtually airtight upon completion. Thin-Joint blockwork enables walls to be built very quickly without having to wait the conventional 24 hours for the mortar to set before further loading can be applied.

Celfix Mortar is cement based and supplied as a dry, pre-mixed powder in 25kg bags. It has been designed to replace traditional sand and cement mortar. Celfix Mortar starts to set within ten minutes of application and approaches full design strength in just one to two hours. This enables blockwork to be built extremely quickly, and in the case of cavity wall construction, independently of the outer leaf, which is normally brickwork.

When Thin-Joint is used in conjunction with the large format Jumbo Bloks the Rå Build method can be used. This provides a masonry frame with floors installed before the external brickwork. This means the inner leaf of the external walls of a house can be built in a couple of days independently of the outer leaf. This allows the first-fix trades to begin their work before the walls are even complete which saves both time and money.

YB: How do H + H products fit in with the self-build market?

Just last year H + H launched the Masonry House Package with a view to specifically helping self-builders. It is designed to take the hassle and worry out of building the fundamental elements of a build project – the walls and foundations.

The Masonry House Package includes technical advice, detailed product specification

and the supply of vital masonry related products required for the build.

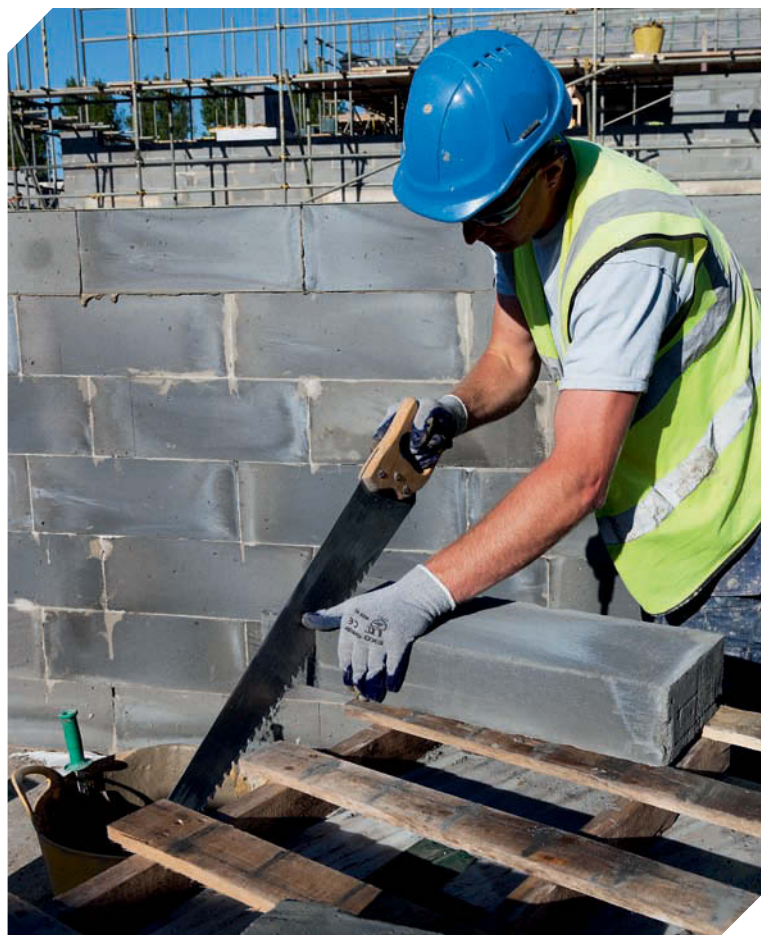
Customers can send in their drawings for our technical team to assess. Working from the drawings our team will calculate the materials required to build the walls and foundations using Celcon Blocks and the Thin-Joint System.

We will provide the builder with a fixed price quotation for all of the necessary structural materials including Celcon Blocks, Celfix Mortar and wall ties. Once the purchase is agreed we will deliver all of the materials to site. The only thing left for the customer is to decide what the final outer finish will be. The aim of the package is to ensure that builders get everything they need, when they need it.

YB: There is a lot in the media just now about off-site and modular construction systems. Do you think this will be something that self-builders will become involved with?

Modular and offsite construction is very topical at the moment because Housing Minister Brandon Lewis believes it to be the way forward with regards to solving the housing crisis. However, the idea does appear to be fraught with issues going back to the nineties. We do not think self-builders will need to become overly concerned with it as masonry building is still far more popular than modular building. The main attraction with offsite construction appears to be the speed of build, but there are masonry systems, such as Rå Build, that can deliver better results in the same amount of time. Also, access may be an issue since most off-site solutions require cranes on site.

YB: Sustainability, thermal efficiency and airtightness are all prime considerations for self-builders. How do H + H products help with this?



As a material, aircrete ticks many of the sustainability boxes. At least 70 per cent of every H + H aircrete block is made of pulverised fuel ash – a waste material that is a by-product of energy generation that would otherwise go to landfill. As a result, our constructions achieve very high ratings in the BRE's Green Guide.

We also score highly on any rating that looks at the issue of local sourcing. Manufactured entirely in the UK from locally sourced material, our products do not accumulate significant “air miles” in travel and also contribute to employment and wealth around our manufacturing bases.

Just as significant is the role our products play in the construction of sustainable buildings. Our philosophy is very much one of fabric first – that energy efficiency should be built into the fabric of a house so that it remains effective for the lifetime of the building. This philosophy is now reflected strongly in Part L of the Building Regulations. We believe that this is a far better option than relying on technologies that are either unproven over the longer term or rely on the behaviour of the building occupants for their effect.

YB: In recent years we have seen a changed weather system in the UK, it's wetter but also warmer. How can self-builders combat this in order to ensure the house is liveable all year round?

The most recent guidance on flood resilient constructions was last published by the Department for Communities and Local Government (DCLG) in 2007. The advice laid out two strategies: water exclusion and water entry.

Regardless of what water strategy is implemented when building a new home, the principle material used in construction is vitally important. For both strategies masonry is the preferred building material as it is not made from materials that have the potential to rot and lose performance when wet. The type of mortar utilised in masonry constructions can also help with keeping water out of a property. The DCLG's document says: “there is evidence that thin layer mortar construction is a good flood resilience option” – this is more commonly referred to as the thin-joint method of building.

For a home built using a water exclusion strategy the expected amount of leakage into the fabric of the building is minimal. Because of this,

the DCLG recommend the use of aircrete blocks. Although they may retain moisture for longer than traditional mortar, they allow less leakage.

With regards to temperature, a recent report by the NHBC Foundation found that there is increased evidence that new and refurbished properties are at risk of overheating and that as a consequence, the health and well-being of owners can be negatively affected.

Certain materials, such as masonry, can counteract the problems of overheating, whilst conversely other more lightweight materials can make the problem worse. The thermal mass characteristics of masonry blocks enable them to extract heat from the building during the day, hold it there, and release it back in at night when it is cooler. However, in lightweight frame structures, heat can get in but it is difficult for it to escape. In hotter climates, builders are recommended to use thermal mass where possible to make buildings more comfortable. The use of materials with high thermal mass properties, such as aircrete, mitigates the need for increased ventilation which is often needed in lightweight frame structures ■

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Phase 1 **Footings &** **Foundations**

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Paul Madge outlines the heating options for off-grid living and explores how combining a hybrid heat pump system with a secure LP gas supply can ensure a reliable and greener energy alternative

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In the second part of her focus on planning and laying foundations, Penni Brooks outlines what you need to know about the different types of footings and foundations



Phase 1 The drive for Cleaner Living



Paul Madge, of Calor Gas, discusses the heating options available for off-grid living and explores how combining a hybrid heat pump system with a secure LP gas supply can provide a reliable and greener energy alternative, while helping to lower running costs



What makes a dream home? Location, design, fixtures, fittings? They're all essential factors – but for many self-builders, living in a space that is kind to the environment is just as important, with an increasing amount of homeowners opting for cleaner appliances – such as energy saving fridge freezers – and installing renewable heating solutions that are cost-effective and efficient to run.

With this drive for greener living comes the need for more energy-efficient heating solutions, especially if you are moving to or renovating a property in a rural location that is not connected to mains gas.

Fuel costs, boiler efficiency and reliability are all important factors to take into consideration, and make some of the latest renewable technologies well worth exploring.

Reliable renewables

If you're in search of a clean and efficient way to heat your home that doesn't break the bank, installing a renewable solution could be the right step for you.

However, some homeowners may have

concerns surrounding the reliability of a renewable heating system and whether it will be able to cope with the energy demands of a busy, working home.

The good news is that for those looking to invest in renewables for cooking, hot water and heating in their off-grid home, there is an alternative – hybrid systems.

For rural customers, a hybrid system that combines renewable technology alongside LP gas as a secondary fuel source can be an ideal solution for homeowners that are apprehensive about relying on renewable systems alone.

Choosing a hybrid system with gas as a back-up energy source provides dependability and reassurance. The heat pump is ideal to provide warmth for the home on milder days, and the LP gas boiler offers a safe and reliable secondary source of fuel to give users peace of mind they will never be without heating or hot water.

In addition to this, there are many benefits to using LP gas as a fuel source to help heat your home. It offers a convenient and versatile option for off-grid properties, providing fuel for central heating, hot water, fires and cookers. In short, it provides all of the same benefits of mains gas, but off the beaten track!

It is also the cleanest burning fossil fuel,

emitting 11.7 per cent less CO₂ per kWh of energy used than oil, and is virtually impossible to steal – a great plus for those in rural areas where oil theft is on the rise. You've also got the option of hiding the bulk tank underground, which can maximise your outdoor living space too.

Going hybrid

Whether it's a new build, retrofit or self-build project that you're working on, chances are you're looking for a heating system that won't cost you the earth. And, if you're off-grid, you'll want to make heating and fuelling your home just as affordable as for those using a mains gas supply.

This is where hybrid systems can really pay dividends. They allow you to input your energy tariff and will calculate the most efficient mode to deliver the lowest running cost, resulting in savings of up to 35 per cent on your fuel bills.

Hybrid systems are the ideal choice for renovation projects, as they can be used with the existing radiators in the property, saving the unnecessary costs of refitting throughout and enabling you to retain the existing features and retain character in an older retrofit.

In addition to this, systems that utilise heat pump technology and renewables are eligible for



This pic and above: Daikin Altherma heat pump. Left: A Calor underground tank



Calor has joined forces with Daikin to offer a hybrid, off-grid heating system

the Domestic Renewable Heat Incentive (RHI), a high profile Government-funded scheme enabling homeowners to receive payments of up to £600 per year, for up to seven years.

With these factors in mind, at Calor we have joined forces with renewable energy specialist Daikin to offer a unique hybrid, off-grid heating system. The system combines the award-winning Daikin Altherma air-to-water heat pump with a condensing combi boiler that is fuelled by LP gas.

By using the outside air as a renewable energy source coupled with an on-site LP gas supply tailored to the size of your home, you can generate reliable heating and hot water that won't cost the earth.

It's intelligent too. The Daikin automatically selects the right mode – using either the heat pump or boiler – depending on the weather, in order to provide maximum efficiency. And what's more, the heat pump sits discreetly against an outside wall of your property, so as to not intrude on your inside living space.

So if you are looking for a sustainable, proven off-grid fuel option that is environmentally sound, efficient, and also cost-effective, then a hybrid system that incorporates LPG could be the ideal solution for your brand new home ■

www.calor.co.uk



Phase 1 **Part 2**

Planning & laying your Foundations

Advice from Penni Brooks of P&P Groundworks

So you've decided to self-build? No doubt you've spent hours deciding on every detail of the functionality, aesthetics and technical specifications of your house. But what about the footings and foundations? Whilst the house itself may be the exciting bit, it's essential to get the foundations spot on for any build, and especially if you're opting for a pre-manufactured house in which case, the foundations must be precision-engineered.

In this feature I will take a look at everything any self-builder needs to know about different types of footings and foundations:

Soil survey

First things first; you need a soil survey to identify the soil composition and ultimately, to

ensure that your footings are constructed appropriately to support the investment in the house. The soil survey involves digging trial pits from which samples are taken at various depths. The samples are analysed in a laboratory to determine the actual make-up of the soil – percentage sand, clay, grit etc. It also takes into account the moisture content and checks are made as well for the presence of hazardous substances such as radon.

N.B. A soil survey can cost from £1,800 – £2,500.

Topographical survey

This shows the layout of your site and its level relatively to a standard datum. A topographical survey isn't always essential but can be very useful. *Allow £1,000 to £1,500.*



Structural calculations for footings

The technical specification for the footings is dependent on the soil survey and combined with the structural drawings, the depth of the footings, whether double or single steels are needed in the slab and the required depth of the concrete over-site, etc., would then be determined by the structural engineer who produces structural foundation and slab drawings. One thing's for sure, it's vitally important to get the structural calculations ►



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right to enable the groundworker to work to the precise drawings.

N.B. The structural calculations can cost £1000 – £1800.

Footings

The depth of the footing is initially set in the technical specification and is based on the load the footings have to bear and the soil composition as identified by the soil survey. The normal depth for footings is 1 metre for estimation only, but the structural engineer will determine the depth according to soil type and density. Identification of pockets of poor soil structure, tree roots, etc., can result in the footings having to be made deeper. This problem is more likely to be encountered on 'brown field' sites i.e. those where there has been construction in the past and where there's a presence of trees.

Types of foundations

Depending on the type of ground, different types of foundation are available:

Strip foundation

This is a footing dug to depth issued by the structural engineer and checked by the building inspector. Strip foundation has a concreted footing block to the under slab, and then a mesh bottom with an anti-crack mesh over internal walls which is shuttered and concreted.

Trenchfill foundation

This is the same as strip foundation but the footings are filled with concrete to a specified level thus cutting down the block depth.

Piled foundation

Used if the soil is unstable, i.e. soft clay or where the ground is not consistent all the way around the footing and there's very low compaction.

Raft foundation

A reinforced concrete raft or mat is used on very weak or expansive soils such as clays or peat. They allow the building to 'float' on or in the soil. A raft is used where the soil requires such a large bearing area that wide strip foundations are spread too far, making it more economical to pour one large reinforced concrete slab. A raft is an alternative to piles as it can be less expensive.

Pad foundation

Used when isolated loads need to be supported, for instance to support the columns of a steel or post and beam frame house. The load is concentrated on a small area.

N.B. Some pre-manufactured housing can't use block and beam as they need ground

bearing or strip foundations due to their fixing bolts. On some of the foundations some pre-manufacturers also require different tops. For example, some English timber companies require an upstanding on every internal and completely around the outer edge of the slab of a dolly block. This allows the timber frame to be above the wet screed that would be placed inside the house as a flooring.

Beware of escalated costs

Removal of waste can incur an extra cost. An estimate is usually based on the assumption that soil excavated during the digging of the footings can be redistributed around the site. If that is impractical or undesirable though, the waste soil will need to be removed. The price for this varies widely throughout the country with costs varying between £180 and £250 for a single 16 ton load. The cost for disposal of plants and other green matter can be even higher, and it is worth considering the environmentally friendly alternative of chipping and composting on site. In some cases local by-laws may permit burning of the organic material on site, but you need to consider the impact on your neighbours even where the practice is permissible.

Remember also that although your house is free of VAT, if it is your primary private residence any services that you buy are not VAT exempt. So you will more than likely have to pay VAT on the soil and topographical services, the disconnection of services (reconnection or first time connection are normally exempt) and the hire of security fences, gates, signs and toilet etc. ■



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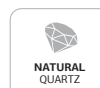
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Phase 2 Framing Your Build



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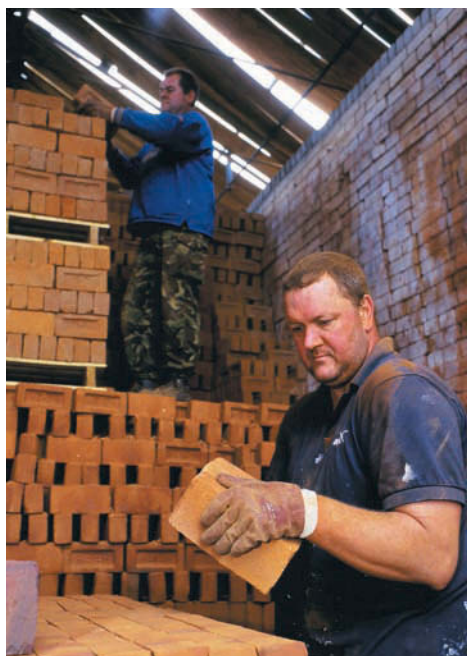
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Phase 2

Brick choice:

Taking

inspiration

from the past

By Graham Irving, managing director of Bovingdon Bricks

When building or restoring a property, particularly in an area of historic beauty, it is important to complement the architecture of the region with sensitive design, detailing and use of sympathetic materials.

Choosing the most appropriate brickwork can be particularly challenging as many modern manufacturers now offer such a wide variety of colours, styles, textures, sizes and shapes of brick, often using sophisticated stains and pigments and automated processes to achieve a specific look. To make an informed choice it is important to appreciate the idiosyncratic and regional way that bricks have actually developed.

In the fourteenth century rectangular bricks as we know them were first introduced from the continent. In those days, most English towns would have had their own brickworks and the bricks were generally made by hand on site from

locally dug clay. Sizes varied and bricks from one part of the country often had a completely different colour and texture from those made in another area.

The characteristics of these bricks were essentially determined by chemical differences in the local clay, the type of sand used in the mould and the colour of that sand. They could also be influenced by differences in hand moulding, the fuel used for the firing and the temperature and position of the bricks in the kiln. All these variable factors created a certain irregularity, which added to their aesthetic charm.

Most of the fine historical brickwork that underpins our architectural heritage is based on these variable handmade techniques that have been passed down through the centuries. The Tudors and the Georgians developed these methods into a highly skilled craft, creating elaborate brickwork with extravagant shapes and ornamentation – most notably the decorative twisted spiral chimney stacks, many of which still

survive on listed buildings from that period.

Similarly, the patterned herringbone brickwork from the sixteenth century onwards, which replaced wattle and daub filling, and the majestic diaper patterns of Hampton Court have endured and continue to inspire architects with their unmistakable ornamental qualities.

Decorative brick bonds such as the Flemish, Header and English bonds, often found adorning historic town houses and country homes, have also had an enormous impact on our built environment, making traditional English brickwork varied, rich and distinctive.

The decline of traditional skills

Despite the stringent planning regulations designed to protect our heritage, some regions of outstanding beauty are unfortunately being gradually eroded. The influence of standardised designs, inappropriate use of materials, such as ugly modern cement mortars, more uniform looking machine made bricks, and the seemingly



Images show examples of Bovingdon Bricks: "It is important that self-builders and renovators take inspiration from the brickmaking of the past in order to preserve and enhance our architectural heritage for generations to come"

ubiquitous use of the stretcher bond are just some of the features that can dilute the architectural character of an area.

Part of the problem lies in the decline of traditional regional brickmaking. The drive for greater economies of scale through increased mechanisation and the effects of several recessions have meant that many of those small-scale brickworks, which used to serve specific areas of the country, have had to close down leaving fewer traditional craftsmen.

Unfortunately, the production of genuine historically sympathetic and authentic looking English bricks requires precisely those traditional, handmade skills that are dying out. At Bovingdon Brick we are one of the last remaining brickworks whose processes and the end products have hardly changed over the years.

What distinguishes Bovingdon is our continued use of old-fashioned natural processes, which require very little artificial intervention. Dug from local clay reserves, the soft pugs of clay are

thrown into wooden moulds and then dried for three to six days in gas fired drying sheds before the bricks are stacked by hand at the side of the kiln.

The colour of these handmade bricks is determined not by the use of modern pigments, but by the intensity of the heat and their position in the traditional open top 'updraught' Scotch kilns. This technique is very close to that used in old style 'clamp' kilns, which is thought to be one of the oldest means of firing.

As the only additives used are sand and anthracite, the natural irregularity of colour is largely determined by fluctuations in the weather, the air supply and temperature variations. This somewhat unpredictable firing method produces highly sought after Berry Multis of immense character with a richness of colour that ranges from flaming orange to subtle grey to gentle brown, frequently found in the Chilterns and Hertfordshire.

By using these age-old techniques, the

company is able to replicate the intricate colours, shapes and the varied sizes of bricks that were made hundreds of years ago, making them a preferred option for many restoration projects in the region.

Preserving the built environment

Although modern manufacturing methods, with their efficient production lines and enhanced quality control, are capable through artificial staining and weathering techniques of producing aesthetically pleasing bricks at economical prices, an increasingly important role is also being played by older-styled forms of craftsmanship.

In a market dominated by volume manufacturing, it is all the more important that self-builders and renovators take inspiration from the brickmaking of the past in order to preserve and enhance our architectural heritage for generations to come.

www.bovingdonbricks.co.uk



Phase 2 A Dream Fulfilled

Roger Yeoman was looking to build a home that would need minimal maintenance and be energy efficient so he and his wife could live out their retirement in comfort with low running costs. Your Build looks at the role that ICFs (insulating concrete forms) from Logix played in the project

Any potential self-builder looks forward to planning their 'dream home', where their wish list of desires are included. Invariably the style and layout of the build are a must, as is keeping within budget and to a time schedule. More recently the need for the home to be maintenance free with low running costs has appeared on the list of self-builders' priorities. As a result, in a world of uncertain fuel supplies and costs, greater attention has been given to the methods of keeping the house warm, without expensive on-going fuel bills. It was these criteria that determined Roger Yeoman's specification for his dream home, when planning to live out his retirement on a fixed budget pension.

Having worked hard throughout his life, Roger Yeoman wanted to be absolutely sure that when he and his wife Sally retired, they could live their remaining days, worry free in a new comfortable

dream home. His main concern was that, as well as having an attractive home to suit his lifestyle, they should not have the burden of meeting ever increasing fuel bills just to keep warm. He commenced a programme of extensive research to fully understand the end result of the build components he would be specifying. He sought advice from professionals, suppliers, internet research and also took a visit to BuildStore's National Self Build & Renovation Centre in Swindon.

The design criteria included a 2 bedroom home that would need minimal maintenance and be energy efficient. It needed to be of generous size; face due south; have sunlight in the principle rooms all day; and provide a pleasant space for Mrs Yeoman's craft work. The criteria of the build included following the principles for high code and passive homes, including paying attention to planning the details of the build to ensure the construction was simple to build, robust and energy efficient. ►





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More than U-Values

Early on Roger realised it was not only about U-Values, but that he also needed to achieve good air tightness, minimise cold bridging at junctions, and prevent thermal by-pass (where heat escapes around insulation). In his research he realised that when even a small gap the size of a 5 coin between the insulation and the warm side of the build locally could increase the heat loss by 60 per cent, the choice of the build system would be very important.

Roger believes ICF tackles many of these problems, and he says he chose Logix because a Logix ICF wall structure will give provide U-Values of $0.23\text{W/m}^2\text{k}$ to $0.11\text{W/m}^2\text{k}$ and airtightness values below $2\text{m}^3/\text{m}^2/\text{hr}$ and typical Y values of $0.35\text{W/m}^2\text{k}$ or better.

Mr Yeoman says he quickly came to the conclusion that he needed to use the same basic principles to the rest of the fabric of the build. The Isoquick Insulated Concrete Raft was the obvious choice for the ground floor, where the interlocking base and perimeter blocks eliminate any chance of cold bridging. A cassette roof system was chosen to complete the Thermal Inertia envelope of the build fabric. By combining these three methods of construction, Roger was able to achieve excellent airtightness levels. There were no special airtightness measures between the insulation and the warm side of the wall for the construction other than attention to detail. The air tight test achieved 0.59; a pass for Passiv Haus standards.

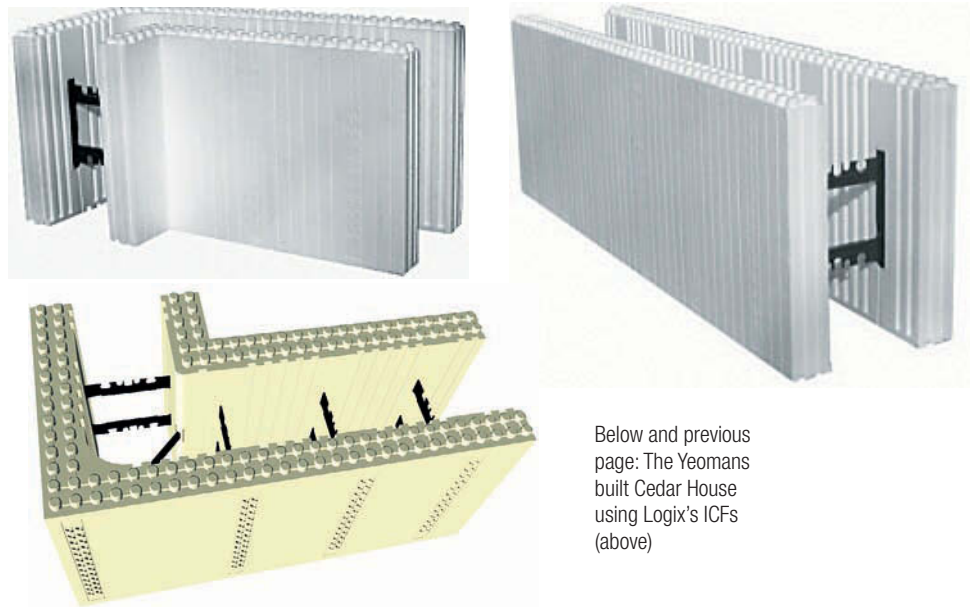
Minimal needs for heating

Mr Yeoman took the decision not to install a heating system, as it was thought that the need for heating would be minimal compared to the installation and subsequent servicing costs on a gas heated boiler.

To make as much use as they could of the available natural resources, photovoltaic panels facing due south were installed and made a valuable contribution to keeping running costs down by providing the domestic hot water. The water for the toilet, washing machine and the garden is sourced by a 6,500 litre capacity rainwater harvesting system.

The result is that Ecofirst Consult's energy calculation targets have been met; Cedar House does not have an expensive heating system; the Yeoman family does not have to rely on Wind Power, Power Stations, or fluctuating foreign fuel supply and uncertain costs; and most importantly have fulfilled their dream in what they describe as a snug, new-built home, which will keep them warm in their old age ■

www.logix.uk.com



Below and previous page: The Yeomans built Cedar House using Logix's ICFs (above)





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Phase 2

An update on Crossway



The UK's first retrospectively certified PassivHaus

Richard Hawkes left his job in the city to pursue an environmentally-friendly dream and build his very own self-sufficient home. However, this was no ordinary self-build venture. In fact, the resulting development – Crossway – was later to receive awards for sustainable design. Not only does it have the world's largest standing wooden arch, the home is also the UK's first retrospectively-certified PassivHaus. Richard tells Your Build his sustainable story

The first stage – the eureka moment

For me, approaching a construction project requires more than just drawing and specifying a fit-for-purpose building. The development has to meet exact living requirements, while also reflecting the surrounding landscape and fitting seamlessly into the scenery.

With our particular plot, this was far from straightforward. Few surrounding buildings and miles of rolling green countryside made fitting the house around the local area a real challenge.

I knew the design had to be different, so spent weeks making models, toying with different ideas and researching similar projects, before finally stumbling upon the perfect solution. Although I had no idea how to approach the build, source the materials, or even if the structure would work, I decided to explore the idea of a 'living' green-roofed arch.

The idea of a curved build fitted perfectly with the rural landscape, while the living element would ensure a sustainable project – something that I was keen to embrace throughout the planning and development process.

Following weeks of making cardboard models and drawing initial sketches, we chose our favourite design, which was worked up into planning blueprints, before being transformed into schematics using architectural design software. The development applications were finalised and sent away for planning permission. Our dream project was finally underway!

The second stage – no compromises

We were then able to start full-time building work to transform an empty plot into a brand new family home. By this time we had spent months battling with planning applications, and, to top it off, my wife was now four-months pregnant. We were still to source the majority of materials and hadn't yet worked out how a living arch would support its own weight.

Working with researchers from Cambridge University, we explored the arch structure and discovered a way to guarantee a sound design,

while still keeping to the initial schematics.

We partnered with local contractors and building product manufacturers to source materials from the immediate area, including green roofing plant varieties from the Kent countryside, clay tiling from the local ceramic specialist and timber from a few miles down the road.

Although the materials took slightly longer to manufacture than their easily available mass-produced counterparts, using local sources and sustainable methods made the whole project not only more eco-friendly, but also meant that the development would give something back to the community.

After initial delays, application worries and design complications, the project quickly took shape. In fact, just 12 months later the structure had been erected and the arch was standing. We had completed and fitted the majority of exterior features, so the next focus was finalising the interior.

This had all been agreed and prepared in advance, so the rest of the project flowed smoothly and quickly. Despite a few setbacks, the inside of the arch was completed soon after.

However, before moving into the build, we had to apply for project approval to ensure the development had met Building Regulations. This got us thinking. Throughout the planning and build process, we had sourced the majority of materials from the local area, embraced sustainable construction methods and kept the environment a key consideration.

Although this was a great start, we wanted our home to be as environmentally friendly as possible and to exceed the highest echelons of building regulations. We therefore decided to push our green credentials even further and create a completely eco-focused build.

The third stage – going green

Working with companies from across the UK, we introduced a whole host of green energy systems into the build, including a 3.4KwH solar PV-T set

up, a wood pellet system to power the central heating and a number of other gadgets to reduce reliance on non-renewable resources.

Self-generating domestic renewable energy was a relatively new idea at that time, so many of the products fitted were the first systems trialled in the country. Despite this, we were inundated with offers to fit green gadgets, which would see the eco credentials of the project soar.

We implemented the technologies in parallel to fitting the interior, meaning that we could move in as soon as the final touches had been made. A full three years since initial plans and applications, Crossway was finally finished.

The fourth stage – PassivHaus certification

Keen to evaluate the impact of our eco technologies, a few months later we began to monitor energy levels and utility usage.

At first we couldn't believe the environmental figures that were being generated. The result of implementing green tech was staggering. To put this into perspective, our eco arch was consuming five times less energy than a typical three-bed property!

In fact, after further monitoring and research we found total annual kWh/m² to be around 54. This incredible figure was lower than we could have ever guessed. So low in fact that the house cost minus £400 every year to run.

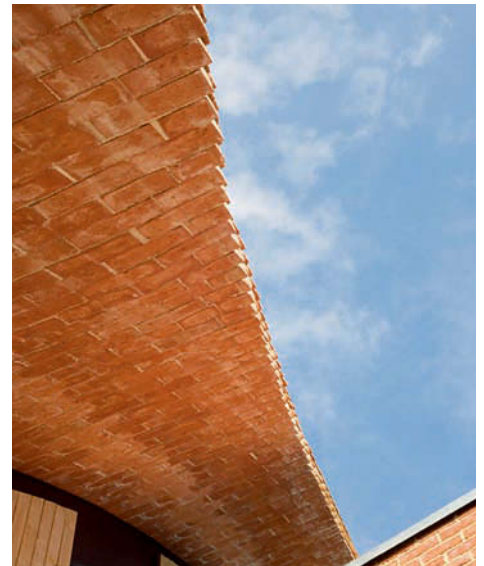
We were advised to apply for a PassivHaus certification – an accolade given to only the most eco-friendly buildings. After official testing and evaluation, the Arched Eco House was officially certified as a PassivHaus.

The fifth stage – the future

Since completing the build, we have been looking to make the property even more energy efficient and recently installed a 4.5kW PV array.

Although the initial set-up generated a significant amount of energy, we used a minimal amount during the day and therefore ended up exporting the majority to the grid.

I started to research ways to self-consume a



higher percentage of this power and came across the immerSUN – an eco device that works in tandem with microgen systems to heat the home.

By directing surplus self-generated energy to the immersion element in our phase change heat store, the immerSUN provides hot water throughout the year and reduces our utility demand even further.

In any property, the immerSUN helps users to self-consume green energy, and can reduce utility bills by up to £250 every year. What's more,

homeowners are still entitled to the export tariff rates given by energy companies to properties that self-generate energy.

At Crossway, the device works brilliantly. Since installation, we have seen an average of 30kWh generated daily via our PV panels, which the immerSUN effectively manages and uses to heat our hot water.

This allows us to self-consume 100 per cent of our green energy, dramatically reduce our wood pellet consumption and provide piping hot water

throughout the day. After just two months we've saved over 700 kWhs, which is astonishing.

As well as the immerSUN, we hope to renew our PV-T panels over the coming months, as well as fully landscape the garden to make room for animals and a vegetable plot.

Our ultimate goal is to make the property completely self-sufficient – from zero carbon energy figures to sustainable and future-proof food sources.

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Phase 2 Forget the myths

— stick to your budget in style

Howard Hirst of Linar puts forward the case for PVCu and explains how it can offer you “the best of both worlds”



Howard Hirst, Linar's
sales director





TV shows such as *Grand Designs* have set the bar high for self-builders – selling the dream and promoting the ‘Rolls Royce’ of materials. But while in an ideal world we all might love to have

golden taps and diamond-encrusted door handles, the reality is that this isn’t an ideal world and very few have the luxury of an unlimited budget.

But being practical and frugal doesn’t mean you have to compromise your design principals and desires, especially when it comes to windows and doors.

Traditionally seen as the poor relation to other materials, PVCu has made leaps and bounds over the past ten years and is now, in many ways, considered a much better option to timber and aluminium.

And that is, in no small way, thanks to Linar.

Long gone are the days when you could choose any colour, just so long as it was white. With chunky frames now a thing of the past, modern PVCu windows and doors are available in a wide range of different colours and wood grain effects with slim sightlines, making them easily as aesthetically pleasing as their timber or aluminium counterparts.

Designs have advanced to the extent that sashes can sit flush in the frame, mirroring a pre-1932 style timber frame – with ‘flush sash’ systems also offering sleek lines with a stylish, contemporary appearance to rival aluminium frames.

The Linar ModLok bi-fold door, launched in 2014, heralded a new breed of PVCu bi-folding doors, offering the strength and security of aluminium combined with the thermal benefits of PVCu. With a string of patents and registered designs, this bi-folding door system is ideal for the self-build market and comes with an optional low, family-friendly threshold.

The patented ModLok locking mechanism provides strength, seamlessly combining the door’s reinforcement with the lock and providing the highest levels of security, at a lower cost than similar aluminium or timber door sets.

And, unlike other bi-fold doors that come in complicated kit form to be built from scratch on-site, Linar’s bi-folds are supplied ready to fit, making them installer-friendly and saving time and money.

So, that shows that PVCu can be just as equally aesthetically appealing as timber and aluminium, but what other common misconceptions can we correct? There are many, but let’s start with being eco-friendly and thermally efficient.

There has been a real surge towards sustainable materials in recent years – another reason that PVCu is the ideal choice. A PVCu window is 100 per cent recyclable and can be recycled up to ten times, giving each window an estimated life span of 350 years – far more eco-friendly than depleting timber sources.

PVCu can also be made from 100 per cent lead-free materials which is obviously better for both

family living and the environment. They use less energy to produce in the factory, in comparison to both aluminium and timber windows. Plus the on-going energy savings are higher, with ten times more PVCu windows achieving a BFR ‘A’ rating compared to the nearest alternative.

Thermal efficiency is key to sustainable living, with increasing importance placed on lower U-Values than ever before. It’s well known that PVCu is a low conductor of heat, helping to retain it within a building and keep the cold out. This is further enhanced by multiple chambers inside the window profiles, allowing them to trap air and create a thermal barrier.

Add double or triple glazing to a PVCu frame and U-Values as low as 0.8 W/m²K can be achieved.

Low maintenance

Considering PVCu for your project is likely to save cost and help you stick to your budget – allowing you to spend in other areas and benefitting your whole build. Typically this material has not only a lower purchase price and lower installation costs, but also lower maintenance costs. With PVCu, the on-going maintenance consists of a wipe down with warm soapy water, making them simpler and more cost effective to look after.

Contrast this with timber windows – they need treating or painting on a regular basis, which is time consuming and can be costly. Aluminium windows can fade and oxidise when exposed to the sun, often requiring the use of specialist cleaners and coatings to restore.

Durability is also an important factor to consider. PVCu frames will not rot, corrode, warp or split, and special additives make them tough enough to suit UK requirements. In addition, the lightweight nature of a PVCu frame makes it easier to handle and install, reducing time on site for fitters and contractors.

PVCu windows are also ideal for the damp British weather. The frames will not swell and co-extruded seals and gaskets make them completely watertight and draught free.

With both timber and aluminium frames, the seals are added in afterwards. Joints can also shrink back over time, causing gaps in the seals. With PVCu, the seals and gaskets are welded together as part of the extrusion process, providing a continuous seal all the way round and eliminating draughts. And with Linar windows, the patented bubble gasket means no gaps – not even in the corners.

With a wide choice of colours and finishes available, PVCu windows and doors can give your new home the appearance you desire at an overall lower cost.

So when you’re planning your project on a tight budget but don’t want to scrimp on doors and windows, you can rest assured that by opting for the ‘cheaper’ choice, you really are saving money without compromising on style – to put it simply, you’re getting the best of both worlds.

www.linar.co.uk

16th Century farmhouse receives modern upgrade

Your Build takes a look at how Warmshell helped preserve the integrity of a historic building, turning it into a modern low energy multi purpose space



Severe subsidence, crumbling walls, a decaying roof, widespread damp and insect infestation, had left 400 year-old Tyland Farmhouse, near Maidstone in Kent, facing dereliction.

Bringing this Grade II listed building back from the edge would be a challenge, but one that Kent Wildlife Trust were ready to take on.

With local conservation officers requesting that only traditional, breathable materials be used, that meant finding a sympathetic restoration solution that would not only bring this late 16th Century farmhouse up to modern day energy efficiency standards, but which could be used on areas where the original timber frame had been replaced with 9 inch solid 18th Century brickwork.

After extensive research by project surveyors Corker Conservation, Warmshell was identified as the best option – a complete external wall insulation system including insulation, fixings, profiles and their fixings, render and reinforcement, from specialist manufacturer of environmentally friendly and energy efficient mortars, plasters and renders, Lime Green.

Consisting of wood fibre boards with lime-based render over, Warmshell uses natural materials in a way that would protect the structure of the building, but also enable it to breathe – vitally important if moisture wasn't to become trapped. Many of the original problems the building had suffered were the result of the existing cement render – up to three layers and 80mm thick in parts – which had trapped damp deep within its fabric.

The natural hydraulic lime that is used in Lime Green renders meant that the structure beneath would still be able to breathe, so there would be no repeat build-up of the condensation, mould and rot that there had been with the original cement render. And thanks to lime's inherent flexibility, the external surface wouldn't crack or shrink to let in rain or damp.

Installation

Once the building had been stripped back to its frame and structural works carried out, installing Warmshell could begin.

Unlike standard insulation that infills between timbers, Warmshell panels fix to the outside of the timber frame, effectively wrapping the building in an 'insulative blanket' that removes issues such as air leakage and thermal bridging normally associated with timber and solid-brick constructions.

To add to the building's energy efficiency, wall voids were filled with Thermafleece before the wood fibre panels were secured, while on the brick sections, a levelling coat of lime render was applied first. This not only created a flat surface for the boards to fix to, but also removed gaps behind the insulation that could dramatically reduce the effective U-Value through 'thermal bypass'.

A tight fit

The panels were laid in a 'stretcher' bond to the exterior, with their tongue and groove edges ensuring a tight fit. Five thermally broken Warmshell fixings were then used to fix each

board. With the wood fibre panels in place, a base coat of Lime Green's Prebond WP lime render was applied to the external surface, with an embedded glass fibre mesh used to bind individual boards together into one robust and cohesive unit. Then Lime Green's Finish WP render was used as a topcoat, with the colour and texture chosen to fit in with local historic architecture. As the render is self-coloured, no redecoration will be required.

Where masonry wall met timber frame, a carefully concealed movement joint was created to hide the transition.

Overcladding the roof with further wood fibre panels guaranteed full insulation of the roof, with care being taken to retain the natural undulations of the ridge. The original Kent peg roof tiles were then reused.

The installation of Warmshell dramatically changed the U-values of the structure, with the brick walls improving from 2.38 to 0.40 and the timber-framed walls from 1.8 to 0.33, contributing to an 85 per cent reduction in heat loss through the fabric of the building ■

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Right: Elegance conservation casement window. Flush sash design, softwood timber frame. BFRC energy rated A-B



Phase 2 Window Selection: Talking Timber

Tony Pell, senior product manager at JELD-WEN talks about the benefits of timber and the latest innovations in window energy ratings

As the economy becomes more stable, confidence in the construction sector is growing and it seems that 2015 is the year to build. Over the last year, self and custom building has featured heavily in the press, with news of the new land release scheme – Right to Build. In addition to the self-build and custom house-building scheme, it seems that summer is going to be filled with prospective self-builders developing large scale projects, with many focused on developing energy efficient, beautiful properties.

Benefits of timber

Historically, self-builders have opted for PVC-U but there is an increasing demand for timber windows, and in turn manufacturers are meeting the needs of customers by improving product specification and performance. From sliding sash and casement windows, to flush-sash conservation designs, a vast range of looks can be achieved using timber.

It's a common perception that timber products are a more expensive option than alternatives like PVC-U. Studies have shown that timber windows offer better long-term value than low-cost PVC-U windows, even allowing for maintenance. On average, timber window frames made to Wood Window Alliance standards are likely to last around 60 years with the proper maintenance, compared to 30 years for PVC-U. Timber frames can also be repaired simply and

inexpensively – when a fitting on a plastic windows breaks, often the whole window requires replacement. So although the initial outlay for timber windows may be higher, over the product's lifetime timber definitely is the more cost-effective choice.

Furthermore, timber is an excellent insulator, particularly when teamed with a wide range of double and triple glazing, a combination which can result in reducing the building's carbon footprint particularly when incorporated with other elements of modern building design. With increasing developments in areas of conservation, Building Regulations and planning permission will often stipulate the need for timber window frames that also require modern functionality, including security, sound-proofing and thermal efficiency.

Where previously flush-sash timber windows could not meet the same security and thermal efficiency specification as PVC-U competitors, improvements in modern engineering processes have enabled manufacturers to produce traditional looking designs with modern functionality.

It's worth bearing in mind that renovating with plastic or metal windows can vastly impact on a property's appearance, as the majority of homes in the UK were built with timber windows. Property experts suggest that modernising with PVC-U actively devalues a property, so by upgrading to double-glazed factory finished timber windows you can actually improve the

value of a property while also preserving its character.

Where previously windows were supplied primed or with a basecoat stain, there has been a growing trend for factory finished products, which means that many of the latest designs are supplied pre-painted or with a stain finish. JELD-WEN's factory finished windows come with up to ten years guarantee on the paint finish. So wise self-builders are ensuring that, not only do they get a quality finish but, their investment pays dividends over time.

2015 has also seen a noticeable increase in demand for colour options. Where white was once the number one choice, we're now noticing the use of green and grey tones is on the rise, particularly in conservation areas. Self-builders can now choose from a wide range of RAL colour paint finish options for their softwood timber windows. JELD-WEN's latest spray-line technology also allows for dual colour paint finishing. Finishing the outside of the window frame in one shade, and using an alternative colour for the interior offers a modern twist which complements both the inside and outside of a property, boosting its selling power.

Another tip for improving sales potential is the use of oak throughout a property. Leading





Cottage Bar Casement Window.
Softwood timber frame. BFRC
energy rated up to A+

manufacturers are meeting the demand of style conscious self-builders by increasing the range of oak products available on the market. With so much choice available self-builders can now co-ordinate the oak look throughout a property with A rated energy efficient windows, oak patio doorsets, solid oak and oak veneer interior doors and even an oak staircase for a luxury, high-end finish.

Window energy efficiency

One of the most important developments in window manufacturing relates to energy efficiency, due to increasingly stringent requirements for window energy ratings. To meet the demands, JELD-WEN and other savvy manufacturers are developing A+ energy rated windows in compliance with the BFRC Window Energy Rating scheme. Self-builders are now able to install the highest quality products that offer excellent thermal efficiency, sound insulation and an attractive appearance for their project.

With timber windows now able to cover a range of energy performance levels, they are the ideal specification for sites with varying performance requirements that also stipulate the need for a uniform appearance throughout ■

www.jeld-wen.co.uk



Oak Stormsure
casement window.
Available in a variety of
bar designs. BFRC
energy rated A-B

Phase 2

10 questions you should ask your rooflight supplier and the answers you should expect

You might know whether you need a hinged, sliding or box rooflight, but how do you know what to look for in a rooflight supplier? Glazing Vision answers the key questions

Q1. Do you design and manufacture your own products?

A1. A good supplier will design and manufacture their own products and ideally be specialists in their field. Look for companies with in-house design experience and UK manufacturing facilities that will allow you to view the products first hand and ask further questions prior to purchase.

Q2. What type of glass do you use?

A2. Look for a minimum thickness of 6mm and at the very least an insulated double glazed unit. The glass should be heat soak tested toughened safety glass and have a low emissivity (low e) coating which will help reduce solar gain in summer and keep in heat during winter. Hard coat low e coatings are common but the best suppliers use soft coat low e as this increases thermal performance. Heat Soak Tested glass greatly reduces the chance of Nickel Sulphide inclusions that have been known to cause spontaneous fracture of glass. For optimal thermal performance the double glazed unit will also have a warm edge seal.

Q3. What is the U-Value of the rooflight?

A3. The best rooflight suppliers will be experienced at dealing with U-Values and be able to carry out in-house 2D thermal modelling to determine thermal performance for any design specification. Building Regulations require a whole rooflight U-Value, manufacturers that only quote the glass performance or 'centre pane' U-Value are giving a false perception of their product's performance.

Q4. Can your supplier provide evidence of thermal performance claims?

A4. Providing overall U-Values is the very least you should expect, but ideally your supplier will be able to back this up by providing calculations for your specific rooflight, not just generic documentation for a certain specification of glass.

Look for thermal reports that clearly break down the various values as these are invaluable when dealing with Building Control or architects.

Q5. What loadings can the glass safely withstand?

A5. This will depend on what application the rooflight is designed to be used for. Loadings for a unit installed on a pitched roof with no access will be different to those units installed in a terrace that can be walked on. Your supplier should fully understand the differences and be able to explain in detail what the glass can withstand and provide specific loadings in accordance with current legislation. For example, UK guidelines currently require a 2.0kN/m² uniform distributed load (UDL) and 1.5kN concentrated load for walk-on specification glass designed for domestic foot traffic. Your rooflight supplier should know this and be able to prove that their glass is strong enough to safely withstand these loads.

Q6. How is the glass fixed into the frame?

A6. There are various ways of doing this which differ depending on the type of product. One of the best ways of securing glass into a frame is to physically bond it using structural sealant. This technology is similar to that used in car windscreens and it means that the glass and frame combine to form a complete structural unit. It is also very efficient at keeping the unit air and watertight so no leaks or drafts.

Q7. What finish is applied to the framework?

A7. Again, depending on what you buy and where you buy it there are various finishes available. One of the most durable and long-lasting is a Polyester Powdercoat finish. Look for suppliers that powdercoat their own framework and have suitable quality control measures in place. Qualicoat is an industry recognised organisation that strictly tests its approved applicators

facilities and process – only the best in the business will have a Qualicoat Licence, so try to find suppliers that have achieved this.

Q8. What safety features are included if my rooflight opens and closes?

A8. Some suppliers offer a range of hinged and sliding rooflights for ventilation and access. Access rooflights are becoming increasingly popular as people start to use space on their roof terrace to add function and value to their living space. As these units are often large and heavy, you should ensure that the product you are considering includes appropriate safety features such as soft close mechanisms, current override and proximity detectors.

Q9. Is the supplier a member of the National Association of Rooflight Manufacturers (NARM)?

A9. NARM is an industry body dedicated to the application of best practice in the provision of natural light in built environments. NARM comprises of all the UK's leading rooflight manufacturers and associated businesses and has been formed to promote co-operation between member companies in order to develop and maintain standards and codes of practice. By selecting a NARM member to supply your rooflights you can be assured that the product will comply with all current standards and regulations.

Q10. Does the supplier have a recognised quality system in place?

A10. Rooflights are the perfect solution when looking to provide natural daylight in a build and as popularity increases, so does the number of suppliers in the market. Established suppliers will have robust quality management systems in place to ensure that their process is measured and scrutinised regularly. One of the most recognised is the ISO 9001 standard.

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Using rooflights

to make the most of natural light

Your Build looks at a project where Glazing Vision's bespoke rooflights helped to achieve the goal of blurring the site boundaries

Broombank is a RIBA award winning new build house designed by SOUP architects, situated on the edge of River Alde in Suffolk.

The balance between nature & architecture

The brief, as stated by SOUP, was to "create a relaxed contemporary house within a reconsidered, 'natural' landscape that blurred the site boundaries to its neighbours and adjoining marshland". The location therefore remained a strong focal point throughout the entire project, with each aspect of the build designed to accentuate the stunning views of 'outstanding natural beauty'.

As Patrick Walls from SOUP explains, the central motif was to "try and control the sense of arrival and movement through the house by creating an entrance courtyard to the front which didn't give a direct view through to the River Alde". He goes on to say that "the view is kept and created by the front entrance; you move through into the main living space which then opens out onto the wide landscape". The property itself has been kept minimalist in style; large open space and concrete floors remain neutral in colour to further highlight the surrounding greenery.

The unfolding relationship between nature and architecture is maintained through the property via the carefully positioned rooflights that allow sunlight to pervade the building.

Using rooflights to make the most of natural light

As part of the architect's vision to incorporate as much outdoor space as possible, Glazing Vision were delighted to supply a range of bespoke rooflights to make the most of this natural source of light.

The central feature Glazing Vision supplied was a Bespoke 'Eaves' Flushglaze Rooflight (3650mm x 1685mm). This was positioned within the stairwell, enabling light to flood into a typically dark, enclosed space using both horizontal and vertical sections of glass.

Glazing Vision's ethos of 'minimal framework' made them the natural choice when it came to the roof glazing on this building. In order to achieve the goals of the design brief, the avoidance of visible framework was critical to the overall aesthetic.

The glass on the central feature rooflight

appears to disappear into the building fabric, forming a seamless integration between the glass and building envelope.

As communication is essential when dealing with small details, Glazing Vision provided detailed general arrangement drawings. These included recommendations on how internal finishes might be carried out in order to minimise, and in most cases, completely hide any supporting framework.

Frameless glass finishes are not always easy to achieve. One of the critical design requirements of glass used in any building project is to resist the loads created by wind pressure and snow, as this can dictate the maximum single pane size permitted before the deflection of the glass exceeds what is considered safe. Glazing Vision calculated the appropriate thickness and type of glass to meet the specified requirements. After initially assessing the unit and the deflection of glass to wind pressure, Glazing Vision felt that there might have been a risk of fracture, due to the sheer size of the horizontal pane.

Refining the design for better performance

The rooflight therefore had to be considered with a new specification to deliver the appropriate safety requirements. Glazing Vision's standard glass specification of 6mm toughened glass was increased to 10mm thickness on the horizontal plane in order to minimise deflection. The eaves unit was designed in house at Glazing Vision by one of its experienced cad designers, before being expertly installed to meet the new specification.



Without these revisions, further framework would have been needed to support the horizontal pane of glass; splitting the pane into two sections in order to strengthen the large unit. Ultimately, the overall flow of the glass and minimalist appearance of the property would have been interrupted.

The homeowner's requirement for a haven of peace and tranquillity was fulfilled, primarily due to the carefully planned use of light and space throughout the design build.

Installing the bespoke rooflight required a high level of skill and attention to detail. Glazing Vision was able to adapt its designs to deliver the best possible performance, meet safety requirements and to achieve the desired, minimalist aesthetic.

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Phase 2 Boost Your IAQ:

ARE HOMEOWNERS SACRIFICING THEIR HEALTH
FOR LOWER HEATING BILLS?



As Building Regulations continue to move us towards tighter homes, leading manufacturers from the ventilation industry have joined forces to raise awareness of Indoor Air Quality (IAQ) and the impact it can have on our health. Here Lee Stones, category manager for Xpelair, looks at the key learnings of the campaign, which is driven by BEAMA, and why the quality of air in new homes should be top of the agenda for self-builders

Improved insulation, draught-proofing and high-grade, double-glazed windows all contribute to making new homes air tight. Whilst these measures are ideal for reducing monthly heating bills, the lack of adequate ventilation can increase the presence of Volatile Organic Compounds (VOCs), mould and damp within the home, contributing to poor IAQ.

Couple this with many homeowners keeping their windows closed to avoid additional heating costs, security issues or road noise and it's clear to see why the quality of air in our own homes is becoming an increasingly important health consideration throughout the UK.

We spend more than 90 per cent of our time indoors and whilst there is a global understanding of outdoor air pollution, little is known about the quality of air we breathe whilst in our own homes. Indoor air can, in fact, be as much as 50 times more polluted than outdoor air.

Dust, pets and fumes from cookers or fireplaces, as well as drying clothes indoors and excess moisture from showering are all key contributors to poor IAQ and BEAMA's campaign highlights how this can aggravate pre-existing health conditions such as asthma and eczema. Other complaints caused by high levels of VOCs from everyday household items such as polish or air fresheners, compounded with mould and

damp, include fatigue, rhinitis, dizziness, headaches coughing and sneezing.

According to a YouGov consumer survey, conducted on behalf of the BEAMA Indoor Air Quality Campaign, 58 per cent of UK adults have experienced mould or condensation in their homes and 19 per cent of those claim to have suffered from a respiratory or dermatological condition. The remaining 81 per cent are considered to be at risk.

Ensure adequate ventilation

The key, of course, is to ensure adequate ventilation in the home, reducing the build-up of condensation, black mould and the spores

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which it releases.

Peter Howarth, Professor of Allergy and Respiratory Medicine at Southampton University, has fronted the BEAMA campaign on behalf of ventilation brands such as Xpelair.

He said: "The presence of moulds within the home is a reflection of poor ventilation and increased humidity. Homes with mould are also likely to have higher house dust mite allergen levels and this may worsen both respiratory and skin conditions.

"The lack of adequate ventilation within the home can also be associated with the build-up of non-allergenic noxious fumes which are detrimental to health."

BEAMA also commissioned Prism and

Waverton Analytics to undertake an independent study into the air quality of British homes; analysing the level of VOCs present in the air. Out of the 122 homes tested in the UK, only nine per cent were considered to contain a normal level of pollutants. The remaining 91 per cent of homes contained a pollutant concentration 'above the recommended level'.

Poor ventilation in homes is a major concern and BEAMA's research clearly shows that it can have a direct impact on our health, but now that the problem has been highlighted, the solution is relatively straightforward. Self-builders have access to a wide range of innovative, energy efficient whole-house ventilation solutions from brands such as Xpelair which can boost IAQ. Mechanical heat recovery systems are an ideal solution and a simple addition to your design at the specification stage.

Whole-house mechanical heat recovery systems such as Xpelair's Xcell range can be installed into any new build property and connected via a network of small vents which sit discreetly on the ceiling of each room.

Once installed and programmed according to the specifications of your home, the unit continually extracts stale air from inside the home and replaces it with fresh

air which has been drawn in from outside. By employing a counter-flow heat exchanger, the heat recovery system warms the in-bound air using heat which has been extracted from the stale air, essentially 're-using' the heat from within the property. This helps to regulate the temperature around the home, whilst improving IAQ and lowering heating bills too.

Loft or wall mounted

Whole-house heat recovery systems, such as those from Xpelair which offer best in class heat recovery of over 92 per cent, can be loft or wall mounted to deliver a high-efficiency ventilation solution for any style of self-build home.

Finally, to ensure any newly installed heat recovery system is performing correctly, there are now strict Building Control Requirements which outline correct installation, testing and commissioning procedures which must be carried out, documented and submitted to Building Control. Ensuring your main contractor is aware of Building Regulations Part F concerning ventilation will ensure these procedures are met, and that the performance of your new heat recovery system has been optimised according to the size and style of your new home ■

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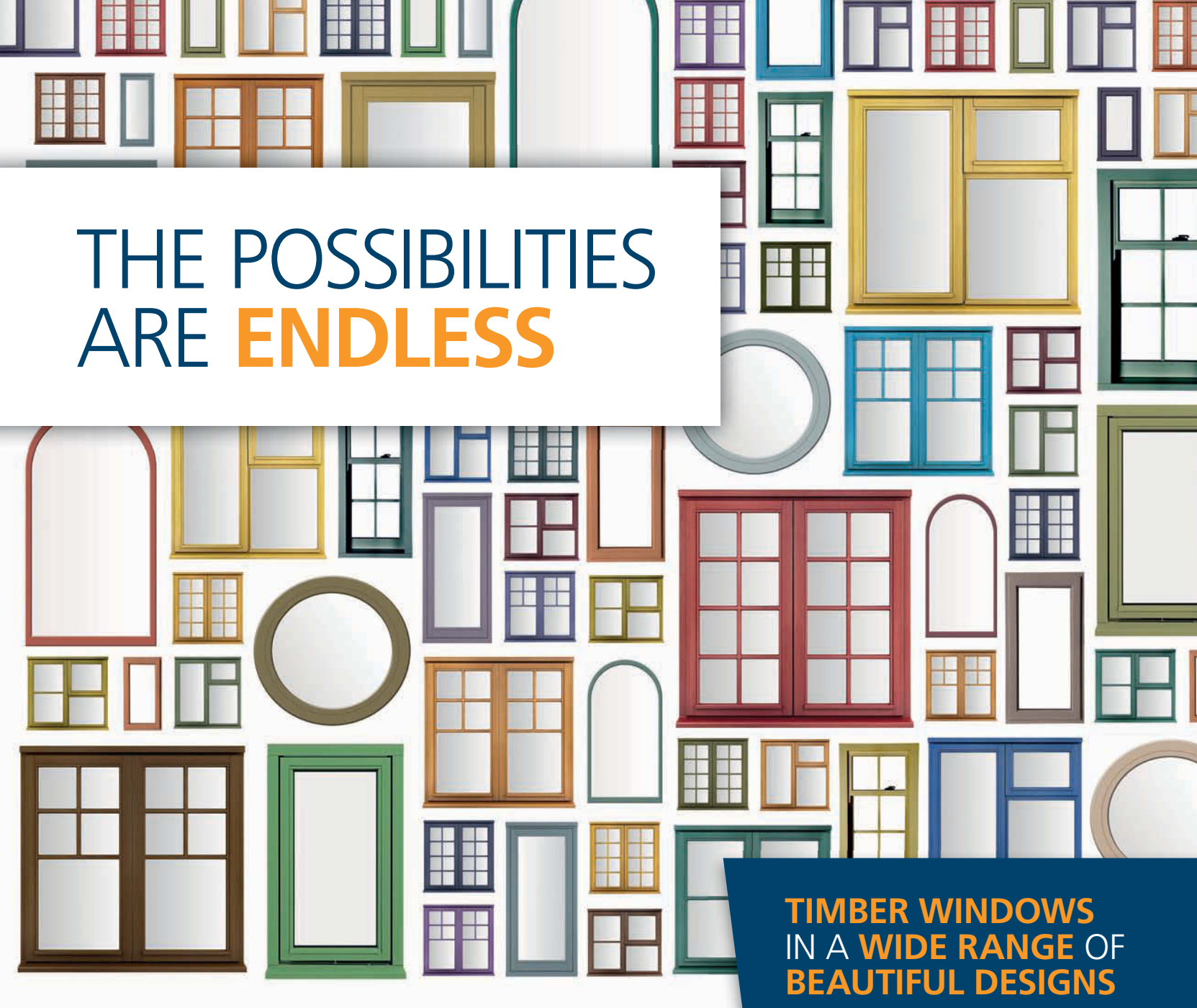
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Phase 3 Interior & Exterior Finishing



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Phase 3 Nearing the finish line

It's always nice to revisit a project as it nears a successful conclusion. Here we take a look at Chitterman House – a project in Leicestershire which we first covered in Autumn 2013 – which incorporated a range of Schlüter-Systems' products, as it nears completion

Chitterman House in Leicestershire has been transformed from a 19th Century home into a stunning and modern family property complete with eco-friendly and sustainable features which include the Schlüter-BEKOTEC-THERM underfloor heating system.

The grand design has been built across two floors accommodating five bedrooms, five wetrooms and 8,500ft² of living space, whilst outside the project has included the installation of a gym, games room and garage.

The impressive build, located to the north of Leicester, has been constructed in several phases; contractors began work, about two years ago, on the project's outbuildings, before moving onto the main house and are now finishing off by installing an extensive terrace which stretches around the entirety of the house. The terrace has been built at the same level as the property's floors, to provide it with a seamless and continuous appearance from the inside-out.

Heating economically

Throughout the project the homeowner's clear vision of energy efficiency has remained integral to the building's overall design. Therefore when questions were raised about how to heat such a large space economically, underfloor heating was provided as the answer.

Schlüter-BEKOTEC-THERM was chosen as the perfect heating method for Chitterman's needs because it runs at a low temperature and gradually releases heat evenly across a wide

surface without leaving any cold spots. The innovative product has been used extensively in the project's outbuildings as well as across the ground and first floor living areas including bedrooms and wet rooms.

Contractor Tony Pearson, of Pearson Properties, said: "No doubt, Schlüter-BEKOTEC-THERM is one of the best on the market and stands out because of its thinner screed which allows for heat to be distributed quickly without using lots of energy.

"The product has been great for this project as it's allowed the property to have individual control settings in each room and the system is ideal in both hot and cold weather because of its ability to pump warm and chilled water through its pipes. The completed installation has proven amazingly straightforward and with help from Schlüter's consultants the whole process has been quick and easy to implement."

Floors & walls

As well as using BEKOTEC-THERM, the project has also used a variety of other Schlüter products to make sure that its floors and walls are safe and secure.

Schlüter-KERDI-BOARD was used to provide a perfectly even substrate to fix to, whilst Schlüter-DITRA matting was used substantially under all tiled and stone floors to serve as an uncoupling layer, bonded waterproofing solution and vapour pressure equalisation layer. All five of the building's wetrooms used products from the Schlüter-WETROOM range and all tiles internally were finished using stainless steel Schlüter-



The exterior is now being finished off by installing an extensive terrace which stretches around the entirety of the house

SCHIENE threshold strips and aluminium Schlüter-QUADEC wall profiles, which offer edge protection and decoration; whilst outside on the terrace, Schlüter-DILEX movement joints were chosen to offer long lasting support.

Contractor Tony commented: "Schluter's products are impressive because they solve problems and provide stunning results and that's why I always recommend them. We used DITRA25-matting quite extensively throughout the house; it's a great product that I've been using for years. Without it, cracks would appear around areas of stress, such as doorways, but now we don't get any of those problems which is great for us and even better for the client."

Take shape

Summing up his time on the project, Tony added: "This project has been great to be involved in and it's been really exciting to see it take shape. We are on target to finish soon and I'm really looking forward to seeing the finished result."

Schlüter-BEKOTEC-THERM uses less material than other systems and is highly durable with damage free practical application for several years as certified by a number of independent institutes. The system is also available with a five year assembly warranty. Unlike other systems, which just provide component warranties, Schlüter-BEKOTEC-THERM customers can have the peace of mind that the warranty covers the whole floor assembly therefore adding additional safety and benefits to the innovative system ■

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Phase 3 Why insulation underfloor heating matters

By Hina Lad of Warmup



If you are at the stage of choosing an underfloor heating solution for your new-build or renovation, one of the most important areas to consider is insulation as this will ensure that any heat generated is not lost.

There are many ways of boosting insulation levels within the home, for example, adding thicker levels of insulation and choosing triple rather than double-glazing. There is also a financial implication in terms of return on investment; a well-insulated home will incur low heating costs. This includes insulating the dwelling, ensuring doors and windows are effective barriers to heat loss and using energy efficient building materials that maintain efficiency throughout their life-cycle.

Reduce running costs

Insulation is a vital component of your underfloor heating system. It is not only needed to comply with Building Regulations, but the use of high quality insulation will improve efficiency and reduce running costs while increasing the responsiveness of your system. Results from our Research Centre in Germany have proved that the use of insulation is essential to get the best

from our underfloor heating systems. Our studies show that using Warmup insulation boards in conjunction with our electric and hydronic underfloor systems reduces the running cost of the heating by as much as 50 per cent. Heat-up time (period taken for the heated floor to reach the desired temperature) can be cut from as much as 2.5 hours to just 20 minutes.

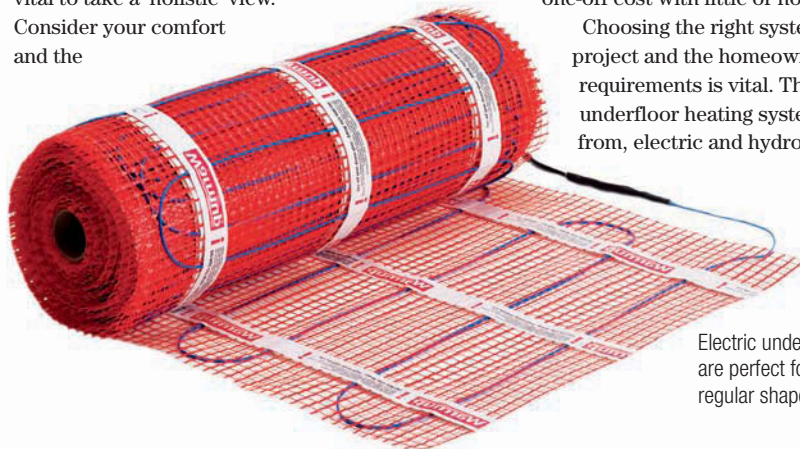
A holistic view

Once you have ensured the dwelling or building is well insulated, the next step is heating. It is vital to take a 'holistic' view. Consider your comfort and the

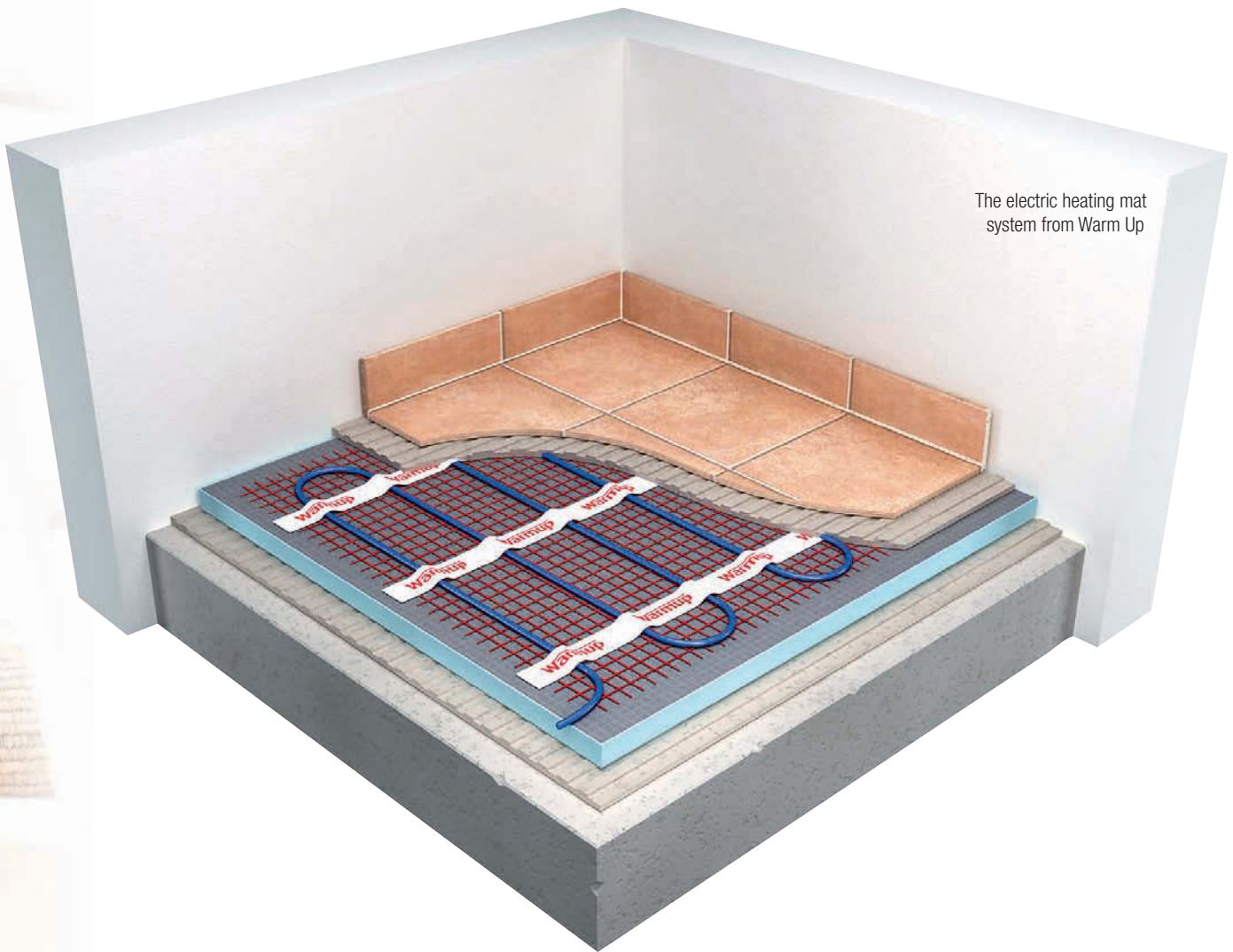
performance of the building simultaneously with the selection of a heating system that will ensure it is comfortable to use, whilst being cost effective to run. These are key reasons why self-builders and homeowners are increasingly looking to companies like Warmup for underfloor heating.

Underfloor heating is suitable for all forms of construction and can be incorporated into any type of floor structure. Compared with other forms of heating, i.e. radiators, underfloor heating offers a cost effective solution in terms of one-off cost with little or no maintenance.

Choosing the right system to suit your project and the homeowner's lifestyle requirements is vital. There are two underfloor heating systems to choose from, electric and hydronic.



Electric underfloor heating mats are perfect for heating up large or regular shaped rooms



Electric Systems

Electric underfloor heating works through conductive wiring which is either supplied as matting, foil or loose wire / cable. Electric systems are available from companies like ours whose heating wire is only 1.8mm thick and is very easy to install. It is simply laid onto the insulation, which is secured to the subfloor, then the floor finish of choice is laid, this can be wood, carpet, stone or vinyl. The system is then connected to the power supply. This offers many benefits including faster installation times, you will also see an improvement in your project cashflow as you do not need to purchase products or labour until later in the finishing programme.

Electric underfloor heating systems heat-up quickly and because they are not embedded within a substrate construction floor, are very responsive. When it comes to efficiency electric is a 100 per cent efficient at the point of use as all electricity is converted directly into heat.

Hydronic systems

Hydronic underfloor heating is

another popular choice, especially for new build. Hydronic systems operate by circulating a controlled flow of warm water through pipes installed in a conductive floor structure (screed) or in conductive elements (diffusion plates), which are embedded into the sub-floor to transfer heat to the floor surface. For hydronic systems, all electrical components are designed for multiple use and longevity; serviceable parts are easily replaced should the need arise.

With both electric and hydronic systems, the room temperature is controlled by a thermostat, for example the 4iE Smart WiFi Thermostat. Smart thermostats offer many benefits, including the ability to remotely control your heating via a smartphone, tablet or computer. Controls like the 4iE have the capacity to learn how homeowners use their heating and the unique way their house reacts. The thermostat can then automatically suggest ways to save energy while ensuring maximum comfort levels are maintained. In the case of multi-zone installations, where a central wiring system is used in multiple rooms, the thermostats can be controlled according to the specific heating output required per zone. The smart ways the 4iE finds to heat homes more efficiently could save homeowners up to £200 on the average UK energy bill, with the potential for an additional saving of £380 when using the thermostat to find better energy prices from alternative suppliers. At Warmup we offer a Lifetime Warranty on most, and a SafetyNet Installation Guarantee on all of our heating systems. So should you accidentally damage the heating wire or pipe during installation, it will be replaced free of charge ■ www.warmup.co.uk



The 4iE Smart WiFi Thermostat. Users can remotely control their heating



Paul Martin, channel marketing manager for Richard Burbidge, talks us through the options when it comes to flooring and advises it's not as time-consuming or difficult as you may think...

Flooring in focus

When it comes to improvements, there is one feature that can add significant value to a property: wood flooring. There's nothing quite like a wooden floor for bringing warmth and style into the home, and not to mention an instant 'wow factor' when you walk through the door.

There is a common misconception that installing flooring is a time consuming, difficult task for self-builders and homeowners; but that couldn't be further from the truth. In some cases, new flooring can be installed in a day, making it an achievable project for DIYers.

Stylish and hardwearing real wood and wood effect is the aspirational floor of choice for the majority of homeowners, and an ideal investment when it comes to resale. The new Richard Burbidge Express Flooring range is inspired by current trends within the home improvement market and has 3 systems: solid, engineered, and laminated, which provide the perfect aesthetic appeal to enhance any room, adding texture, warmth and significant value to a property.

Laminate

Laminate is the ultimate cost-effective option for homeowners wanting to install flooring on a budget. Suitable for all rooms in the home apart from bathrooms, it is versatile, practical and easy to install. Laminate floor does not fade, which

means that even in sunlit areas it will retain its original features for years to come.

Compared to hardwood floors, laminate is a less expensive alternative, which is ideal for sellers looking to increase the visual appeal of their home, without committing to a costly investment.

Engineered Wood

Engineered wood flooring benefits from the natural beauty of real wood, combined with the hard-wearing durability of a multi-layered construction and a choice of three installation methods; secret nailed, glued down or floating.

Solid Wood

For the premium finish, solid wood flooring provides unbeatable aesthetic appeal, while also providing robust performance in high traffic areas, such as hallways and living rooms. Solid wood is a great long-term investment and can easily cover the initial installation cost of the floor, enabling faster sales and higher house prices when it comes to resale.

How to fit laminate flooring

Once you've chosen the style of flooring and measured the size of your room it's time to get down to business.

Let the packs of laminate flooring acclimatise for 48 hours in their unopened packaging in the middle of the room they are to be installed.

Preparation

To lay laminate flooring you need a smooth and flat sub-floor. On existing wooden floorboard subfloors, nail down any loose boards and check the level is no greater than 2mm per 1 metre. New concrete subfloors must be sufficiently dry with a maximum moisture content of 2.5 per cent.

Remove existing floor-coverings such as carpets. Damp floor coverings such as linoleum can be left in place if in good condition.

Roll out the Polyfoam Vapour Control underlay across the width of the room and trim to suit.

Laminate flooring is installed as a floating floor; it must not be fixed to the subfloor and must be installed with a minimum 10mm expansion gap around the full perimeter of the floor to allow the floor to both expand and contract freely.

Cut door frames to allow the floor to fit under and always stop the flooring at doorways and cover the gap with a suitable threshold.

Lay your boards

Lay your boards in the same direction as the longest straight wall, or for a square room lay them in the direction of the sunlight. If you have matching flooring in an adjacent room, lay them in the same direction for consistency.

Last but not least

When you've finished laying the boards, remove the expansion gap spacers and either fix new



skirting board to wall, or if existing skirting boards were left in place, use a cover strip such as White Scotia fixed to the skirting and not the floor to cover the expansion gap.

Maintenance tips

A properly maintained, laminate floor will last for years. Follow these simple tips to keep your floor looking and performing its best.

- Sweep or vacuum regularly and when necessary clean the floor with a proprietary cleaner suitable for laminate flooring. Always use a well wrung out mop and dry immediately.
- Remove liquids from the floor as soon as possible.
- Use a dry mop for cleaning and regular maintenance.
- Use wheelchairs / castors with soft rollers suitable for laminate flooring.
- Use protective floor pads on furniture and chair legs and non-slip matting under rugs to protect the surface.
- Place effective doormats at all external doors to remove grit, sand and water from shoes.

Never...

- Use a wax or varnish coating on Laminate Flooring. This includes wax impregnated cleaning cloths.
- Allow excess liquid to remain on the floor.
- Drag furniture or heavy objects across the floor ■

www.richardburbidge.co.uk



***There's nothing quite like
a wooden floor
for bringing warmth & style***



Phase 3 Smart Rooms & entertainment areas

CEDIA, the Custom Electronic Design & Installation Assoc., outlines what can be achieved by installing technology in the most important rooms in your home



Every project is different. The amount of technology installed depends on the homeowner and what their requirements are. Technology can be installed in any room in the property, but in slightly different ways to enhance the space and provide the features you require in these areas.

Bedrooms

Comfort and style play key roles in the design of the latest technologies for the bedroom. Remote controls and smart panels fitted nearby mean that you can have full control of the technology in your room – and around your house for that matter – from the convenience of your bed.

Many people enjoy the luxury of TV in the bedroom, but find it hard to make it blend with the interiors. One option to make this more aesthetically pleasing is to hide it when not in use. This can be done through enclosing the TV in cabinetry with fold away doors or through a motorised mechanism to hide the TV completely out of sight when it is not being watched. These mechanisms are most popular in cabinets or chests at the foot of the bed, or above the bed in the ceiling and can be hidden at the click of a button.

Audio in the bedroom is most commonly used for listening to music and the radio, however if a

TV has been installed then surround sound should be considered to compliment this. In-ceiling speakers are the most commonly used as they provide a discrete solution which fills the room with sound, but if the homeowner wants better audio performance, then on-wall or in-wall speakers are an option. For the ultimate in unobtrusive sound, invisible speakers that you can plaster or wallpaper over are available.

As well as audio visual, there is a huge range of technology available for the control of the lighting, blinds and the curtains in the bedroom. Different 'scenes' can be set to allow you to change the feel of the room by one click of a button.



Bathrooms

There's a definite trend in adding built in TVs in the bathroom. They can be seamlessly integrated into a bathroom wall and the range available ensures it compliments any décor, including "mirror" screens that disappear from view when switched off. Obviously TV screens in a damp space or where there's risk of water damage should be waterproof.

For audio, in-wall docks are perfect as a subtle and tasteful home for your iPod. They can be easily installed with minimum wires and fuss and connect through almost any local or home audio system.

A bathroom's interior can also be combined with lighting systems to create beautiful effects; colour-changing LEDs provide a beautiful and innovative setting. The scope of colours available means you can cater to any mood, and enjoy a contemporary energy-saving solution to illuminating your bathroom.

All in all, technology allows the bathroom to be transformed into a relaxing environment where you can watch your favourite TV show or listen to your playlist.

Kitchens

The desire for tech pieces, such as flip-down or integrated TVs, so you don't miss your favourite show whilst in the kitchen, or touchscreen family computers that work well on kitchen tables, so ►



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*Lighting scenes can be
set to reflect
the current activity*



you can keep an eye on children doing their homework while you're preparing meals have become popular additions.

A smart kitchen also has the ability to hold professionally integrated audio. This can be installed so that users can play music through their existing iPod without any need for wiring or docking stations. Homeowners can hear their favourite song in rich, hi-fi quality instantly through invisible speakers. These types of speakers can be discreetly installed in ceilings and walls, built into units behind grilles to cabinetry or plastered in completely so they become totally invisible.

As we increasingly spend more of our time in the kitchen, it is also becoming important as a control centre for the rest of the home. Control systems allow homeowners to have control over and monitor the entire house through an iPad, iPhone or built-in custom design touch panel. A 3D representation of the whole house can be displayed in the kitchen and show where music is playing, lights and heating are on, doors and windows are left open and even if there is a fire breaking out.

Living space

For many, the living space is important as it is the entertainment area. It is often an open plan space which means that it is a multi-functional space – used to watch TV, eat dinner, read a book or entertain a group of people.

Typically, the room centres around a TV. The TV can be fitted to a motorised bracket which allows it to be moved to achieve optimum viewing. For example, if you are cooking in the

kitchen but still want to see the TV, the screen can be positioned accordingly.

Surround sound audio is the preferred option for when watching a film. The placement of speakers in rooms is a science and when carried out correctly the sound improvements are immense. Generally the set up includes speakers situated above or to the side of the screen. This allows the sound to be directed to the ear of the listener.

Mood lighting can be achieved in this space. As a multi-functional room, lighting scenes can be set to reflect the current activity; bright lights when reading a book, dimmed light when watching a film.

By integrating the lights, curtains, video and audio entertainment into a control system, the perfect ambience can be achieved in this space.

CEDIA members understand that technology in the home is a significant investment. By hiring a qualified home technology professional to properly design, install and maintain your home electronic system, you can take comfort in knowing that you'll be in good hands now, and in the future ■

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Wood only

Island design



Phase 3 A perfect fit

Graeme Smith, senior designer at Second Nature and 1909 Kitchens looks at the design options and considerations to make for three different kitchen styles

So many times when we ask our customers what they want from their kitchen, they tell us that the kitchen is the heart of their home: a place for cooking, socialising and working. From the parents' dinner parties to the kids' study sessions, the kitchen is now the central hub in many homes. And much as we may have a long wish-list of items to feature in our new kitchen, sometimes compromises may have to be made due to the size and shape of the room. However, if your kitchen lacks in size this doesn't mean you can't still have a beautiful kitchen that's high on functionality and visual appeal. With some clever design tricks, ergonomic functionality and a great mix of colours and materials even the most awkward space can be a pleasure to be in.

So, whilst the available floor space and height

of your kitchen may dictate the layout you can realistically achieve, don't overlook the one thing that will really make a kitchen your own: personality. Whatever the size of your kitchen, the best ones are those that reflect the personalities of those that use it. Let's take a look at 3 different layouts and see how they work in terms of aesthetics, storage and functionality.

Galley kitchen

As the name suggests, the galley is normally long and narrow, and can be either a single – or double, arrangement. However with careful planning and resourcefulness, the design can function as an efficient, streamlined kitchen. A tall, floor-to ceiling larder will hold a surprising amount of provisions. To make the room appear bigger include either glazed wall units or some open shelving to prevent the room from feeling

hemmed in. It will create a sense of space and open up the design. Consider introducing a mix of materials and finishes to prevent the room from being a solid block of colour, which may make the space look smaller than it really is. Go for light-reflective surfaces such as polished granite worksurfaces to maximise the amount of light that bounces off the furniture. Similarly consider cabinets with staggered depth and heights to achieve solutions for a variety of cooking activities and storage requirements – as well as preventing the kitchen from feeling like a corridor. This can be achieved by adding in breakfronts or perhaps a gently curving cabinet at the end of a run of units. The Broadoak Stone design is a great example of a double-galley layout, and shows how using a mix of different doors (curved, glazed and solid) the design has plenty of interest. Also by keeping the colour scheme light,



Left: 1909 Inframe Almond Suede Moleskin; Above: Remo Almond and Chalk Blue; below: Broadoak Stone, both from Second Nature



Galley kitchen

and neutral, the space does appear larger.

U-shape kitchen

A U-shape layout is extremely practical and works particularly well, being ergonomic and allowing for a host of hidden storage solutions and potentially a seating area too. It's a popular layout for kitchen diners and has a lovely wraparound feel to it with plenty of worktop space. If well-designed, it's also comfortable for more than one person working in the kitchen, as there can be dedicated areas for different activities. Make good use of the corner units with Le Mans or carousel storage solutions. If the ceiling height is too low for tall cabinets, consider a run of mid-height units to house eye-level appliances, flanked with clever storage units such as pull-out larders and pan drawers. Keeping the worktops clutter-free, only placing essential and

regularly used items on them, will create a sleek aesthetic in a contemporary design. Consider the interplay of colours in a U-shape kitchen, as they can be used to great effect as it naturally lends itself to creating accent areas, such as the chalk blue cabinetry in the Remo painted kitchen. It not only injects a contrast to the scheme but is also great for differentiating zones in the kitchen, for instance the appliances are all banked in the distinctive blue area.

Island design

Islands are perfect for creating a social hub in the kitchen, bringing many benefits to family meals and when entertaining friends. Don't underestimate the amount of space that is needed to incorporate an island in the kitchen. It's not just its physical size but allowing for walkways either side of it. As an island is so space-hungry it

must really work hard so should be very practical and add something visually to the overall design. A well-considered island can accommodate many areas – prep, washing, cooking and dining – as well as being a magnet in a kitchen where everyone will naturally congregate – hence the saying 'all the best parties end up in the kitchen!'. If there simply isn't space for the much-desired island then a peninsula may be a better option, and it can be just as versatile. In terms of colour combinations, the island is the ideal zone to inject a contrasting tone, it's also an area to play with heights and worktop materials to make the island not just a practical working area but a visual statement too. A vast amount of storage, as well as small appliances such as wine coolers and microwaves can be included in the island ■

www.sncollection.co.uk
www.1909kitchens.co.uk



Phase 3 Dekton's endless applications

Looking for a material for your interior or exterior project?
Cosentino says it can provide the answer...

Cosentino has introduced Dekton, which it describes as a new category of surface that is an ideal building solution for interiors and exteriors. The company says that thanks to its superior manufacturing process, Dekton can be used for endless applications including kitchen and bathroom worktops, floorings and coverings; exterior façades; floors and swimming pools, and it also comes in a variety of colours, textures, finishes, thicknesses and large format options.

Cosentino Group says Dekton is the result of a €128 million investment and 22,000 hours of research and development by its team. The sophisticated mixture of raw materials that is used to manufacture glass, porcelain and quartz surfaces is said to help to create the ultra-compact surface. Dekton can recreate any type of material with a high level of quality and can be used indoors and outdoors thanks to its high

resistance to UV rays, scratches and stains and resistance to freezing and thawing. It is said to have low porosity, good resistance to fire and heat as well as very good colour stability.

The company says Dekton's manufacturing process is what makes this material so unique. Manufactured with advanced TSP – Technology of Sintered Particles, developed exclusively by the group's research and development team – it uses an accelerated version of the processes of high pressures and high temperatures that 'Mother Nature' applied for thousands of years to produce natural stone. With Dekton, the manufacturing time is reduced to four hours and the result is a low maintenance, long lasting product. This process sinters mineral particles so that they link up and change their internal structure. A new mass is obtained that is subjected to a process of ultra-compaction at high temperatures.

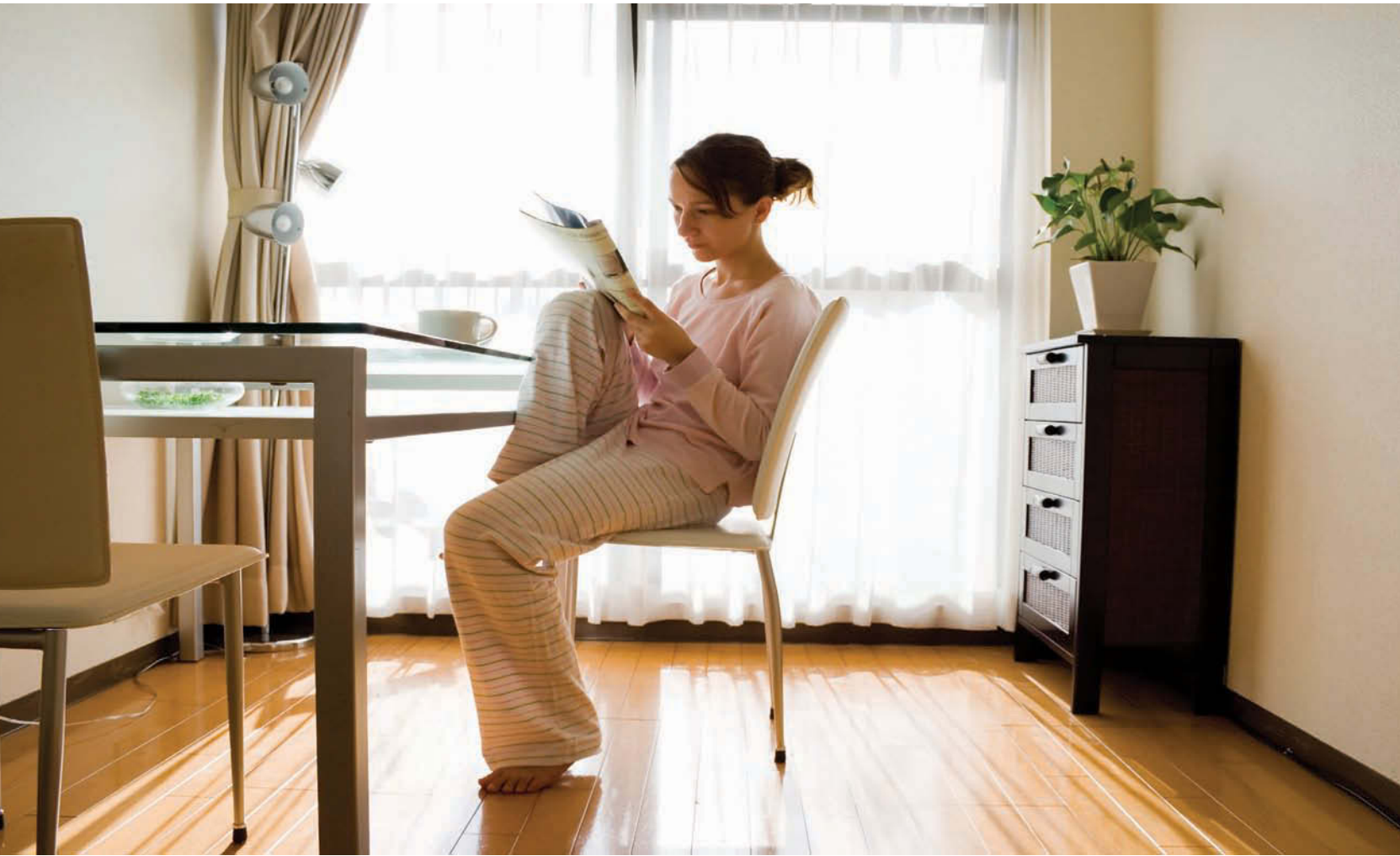
A mixture of raw materials found in glass,

porcelain and natural quartz make up Dekton, which are then blended with several aggregates and water. During the production process, 84 per cent of the water used is evaporated, recycled and reused for the production of Dekton slabs. The ultra-compaction process consists of the raw materials being pressed to remove the air from the mass. The press has a capacity of 25,000 tons, six times more than the world's largest press up to now. The slab is baked at high temperatures and a chemical reaction converts the mass particles into crystals. As the temperatures increase a glass mesh is formed. At maximum temperature – 1,200°C – the entire slab is liquefied just like the magma found hundreds of kms below the earth's surface. As the temperature drops, the slab solidifies.

Dekton by Cosentino is available in ultra size slabs of 3200mm x 1440mm and three different thicknesses (8mm, 12mm and 20mm) ►

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'House of Dekton'

A project by Steffen Kehrle (pictured) looks to highlight the endless possibilities for Dekton in the home

The Cosentino Group will be presenting the 'House of Dekton' project by designer Steffen Kehrle at diverse European shows this year including: Made Expo – Milan: 18-21 March 2015 and Construmat – Barcelona: 18-22 May 2015. Using huge slab sizes, the house delivers what the company calls 'a powerful experience of the ultra-compact Dekton surface.'

Featuring outstanding aesthetics, the House of Dekton (main pic above) combines the many different possible applications of Dekton. The 14-sided house is made entirely of Dekton: floors, walls, roof, seating and a corresponding 14-sided table as the central element. Flexibility is not only demonstrated in the material itself but also in the central table that is used as a counter or meeting point. Dekton kits containing screwdrivers, lighters and aggressive cleaning agents are supplied so that visitors can test the surface's outstanding resilience for themselves.

The material's properties are also communicated via icons engraved in the wall and floor panels, removing the need for additional information boards.

"The material's many outstanding qualities offer both architects and interior designers totally new options, and it is these options we want to showcase with the 'House of Dekton'", said designer Steffen Kehrle (above).

The walls are made from large-format Dekton slabs (3.20m x 1.44m), arranged next to each other as in a house of cards. The entire Dekton house is in the 'Danae' colour finish, an elegant cream shade, reminiscent of travertine limestone. Only the central table with its 15 different shades mirrors the entire colour palette in which Dekton is currently available. The space has an almost sculptural feel and, besides serving as a source of information, it is also a meeting place featuring a continuous circular bench along the interior wall that invites visitors to sit down and stay for a while.

With the 'House of Dekton', Steffen Kehrle has created a place where visitors, architects, designers and clients can meet and experience Dekton. The project provides a powerful direct experience of the multiple options provided by this product.

"With Dekton, Cosentino has launched a very exciting high-performance material, a true all-rounder. There are no limits to your imagination,

everything can be created in one single integrated design: for architects and designers, this is pure heaven", said Steffen Kehrle.

When designing the House of Dekton, Steffen says he opted for a round shape that is reminiscent of many examples from history: the Pantheon and Buckminster Fuller's Dymaxion House, but also of early dwellings like the tepee or even of a circus tent and, last but not least, of a house of cards.

Cosentino's Andalusian home is also referenced in the house as the Dekton slabs to the left and right hand side of the entrance are decorated with an engraved pattern based on the House of Dekton floor plan, and reminiscent of traditional Moorish tile patterns from the south of Spain. This kind of treatment is just one example of the many ways in which Dekton can be personalised. Additionally, the specially developed production technology allows the creation of customised colours, textures, patterns or finishes.

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The *Phase 3* Finishing Touches

There are many exciting milestones when you are tackling a self-build project. For many, this is once the building is sealed, watertight and with all the necessary plumbing and electrics sorted, so work can begin on the interior finishing and a home really begins to emerge. Here, Dennis Scarth, self-build sales director at builders' merchant Jewson, explains why timber materials remain a popular option and how to ensure lasting results

Regardless of budgets, every self-build project requires the highest levels of finish possible. No-one wants to invest significantly in building a new dream property and then compromise when it comes to the finer details. When work turns to the interior of your new home, needless to say even the smallest mistake made or drop in the level of workmanship can prove unsightly for the long-term.

A seamless transition

There are a wide range of areas in the home that have to be considered. Often self-builders will begin by considering the look and feel of the main living area, kitchen and bathroom. At this stage, it can be beneficial to consider how to reflect the chosen style, whether it be ultra modern or traditional, through to other areas of the home such as bedrooms, hallways and studies. By doing so, you can ensure a level of finish that provides a cohesive design and a seamless transition from room to room.

It will perhaps come as no surprise that timber still remains one of the most popular materials for interior finishes. Its natural aesthetic and warm characteristics mean

for many people it is the go to material to create a welcoming and comfortable interior space.

Timber not only offers dimensional stability and durability, but it can also integrate perfectly with any of the other mainstream building materials to create seamlessly successful hybrid schemes. Quite simply, if you are building your own home, the potential and scope for timber application is massive.

In this scenario, it is worthwhile considering design elements such as timber beams, staircases, flooring and balustrades.

Local builders' merchants can provide a wide range of timber products such as architraving, softwood mouldings, windowboards and skirting as well as, of course, the complete sheet timber materials such as MDF, chipboard, plywood and OSB. Those looking to select timber materials themselves should be sure to look out for any twisting or warping. Check each individual product carefully for straight, close grain and the size and position of any knots. This means that whether you, or your tradesperson, cuts, planes or sands the timber, it is more likely to provide a professional finish for your home.

In addition, helping to keep timber mouldings and materials as a popular option for interior

finishes is their environmental aspects, which are high on the agenda for many people – particularly those who are looking to achieve a sustainable build. If you do visit a merchant branch, it is important to ensure that you check the timber you are buying is from a sustainable source. Make sure you speak to staff about Chain of Custody certification. This identifies timber sourced from 'legal' and well-managed forests.

Practical applications

When you consider interior finishes at an early design stage, it is worthwhile talking to the architect or designer about how fixings can work to your advantage from a practical perspective. For example, at Jewson we have seen an increasing number of customers deciding to utilise deep section skirting boards. Not only does this help make them a design feature themselves, but the recess created on the reverse side of the skirting board is also a really useful void. This can either be helpful in getting the board to fit squarely to the wall, perhaps where there is not a perfect and clear join between the wall and floor or alternatively, to run electrical cabling and plumbing services, so these are not visible once the room is finished and in use. ►


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The potential and scope for timber application is massive when building your own home



Protection & care

When your timber interior finishes have been selected and installed you should then consider protecting them for the long-term. This will ensure that all areas such as architraves, skirting boards and balustrading are sealed and protected – making them more durable and hard wearing by providing a protective coating and extending its life. In doing so you'll also give it a fantastic looking finish and add to its natural colour, beauty and warmth by showing off the natural grain.

Gain advice from the outset

It is important to remember that you do not have to be a trade professional to visit a merchant. A well-stocked merchant with a good breadth of range and availability is vital, and it is advisable to make a visit as early as possible into your build in order to view a selection of different products for interior finishing. This will mean when it comes to making the final all-important decision – you have done your homework and sought out specialist advice to ensure the best possible finish for your interior space.

To speak to a Jewson self-build advisor call the self-build helpline on 0800 032 8968, or for further information and to find your nearest local branch visit: www.jewson.co.uk

“***Timber remains one of the most popular materials for interior finishes***”





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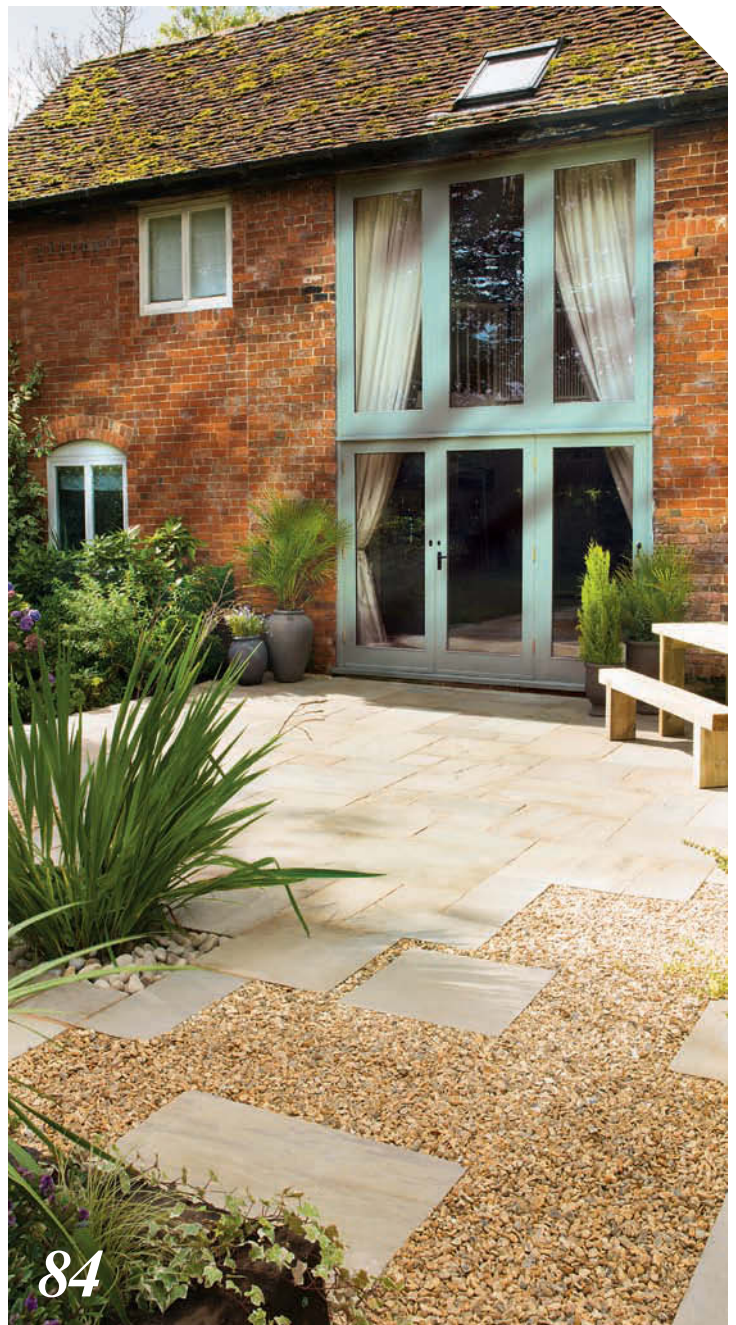
In this section...

84 *Bradstone*

As contemporary design trends continue to grow, we look at some options for the exterior project

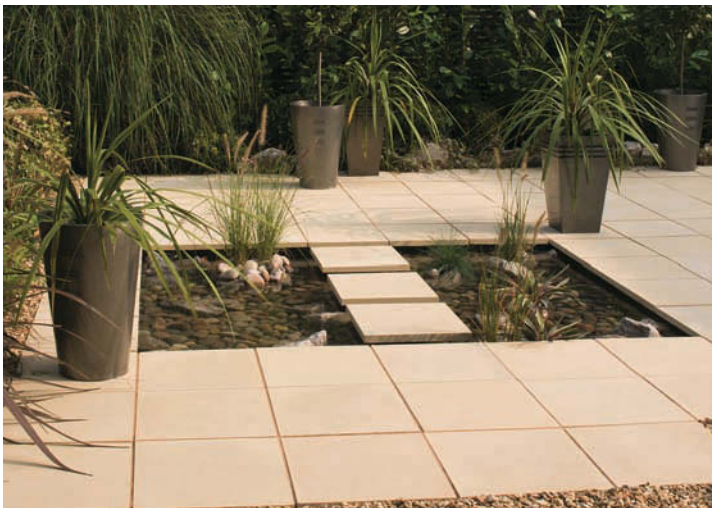
86 *Kebony*

A look at how to make sure you get your timber decking right for the long term



Phase 4 Contemporary thoughts

Contemporary design trends continue to grow, with open plan living, bringing the outside in, and vice versa on the rise with what seems like endless possibilities to make living spaces more comfortable, flexible and dynamic. Here we talk to Toby Stuart-Jervis, commercial director for Bradstone, about the company's range of contemporary products for 2015



There's no doubt that the appetite for contemporary design continued to increase last year and we don't expect 2015 to be any different. The trend to bring the outside in, and to take interior design outdoors, through seamlessly connecting indoor and outdoor spaces continues to grow and so too does the demand for cutting edge, contemporary landscaping products to make these modern designs a reality.

We've found that the level of design and aesthetics expected from external landscaping products has risen at a pace and is now essentially on a par with interior design. This is particularly true of self-builders who in most cases have a blank canvas, with no existing restrictions on how they want to create their space. We're also finding that self-builders are being inspired by current self-build and design programmes, as well as their supporting online resources, which profile contemporary design and really challenge what is possible through well thought out spaces and smart product specification.

From a garden landscaping point of view, the trends have been no different and external contemporary styling is rapidly increasing in

popularity. Last year we saw sales of contemporary natural stone products increase by a huge 21 per cent. Historically, the UK has always been a little more reserved about the kind of external landscaping it would consider using, but recent trends have driven a change in perception and a growing appetite to consider other materials, finishes, sizes and colours which add both visual appeal and value for those looking to achieve a modern design. In our experience, self-builders have been one of the driving forces behind this.

The right Mode

At the heart of Bradstone's strategy is new product development to keep up with current trends and the demand for innovative products delivering cutting edge external design. At the centre of Bradstone's new product collection for 2015 is Mode, a new porcelain paving collection, offering a state of the art design choice for self-builders looking for the most contemporary of outdoor spaces. This premium porcelain paving range epitomises the evolution in the UK's palette when it comes to garden landscaping and is one of a number of Bradstone contemporary new product innovations for 2015.

Mode comes in 20mm thick pavers in two finishes; textured, for a contemporary style with a lightly textured surface, or profiled for a stone-like appearance with added crystals for additional visual appeal. Available in a range of contemporary shades, including Shell, Silver Grey and Graphite, Mode also has exceptional durability, is anti-slip, impervious to staining and is unaffected by weather conditions and colour-fading, meaning it is virtually maintenance free and will retain its premium finish for the long term. We've found that porcelain has been very popular with self-builders already as it provides a viable, premium alternative to both concrete and natural stone and delivers the ultimate wow factor to any outdoor space.

Also included in our new collection for this year is a supersized Grand Natural Sandstone Paving. Grand by name and grand by nature, this new addition to Bradstone's sandstone range has all the distinction and veining variations of natural sandstone – but supersized. With ultra large flag sizes, ranging from 500 by 750mm up to 1250 by 750mm, the finished paving is striking and contemporary and is another popular choice with self-builders looking to create an outdoor space with an impact. It's available in three



*External contemporary styling is
rapidly increasing
in popularity*

Far left: Liscia in Cream;
Middle: Grand Natural
Sandstone in Imperial White;
Left: Natural Sandstone in
Autumn Green; Below:
Mode Paving in textured
beige



stylish shades of Imperial White, Caramel and Grey Ochre. We've also launched a long aspect addition to the popular Panache range and a finely stippled Liscia paving, which offers self-builders a great value option for a patio with effortless chic.

In exactly the way that Sarah Beeny does with her online scrapbook, we've found that providing self-builders with as much help and inspiration as possible is important. At the heart of this is a continued strategic partnership with award winning designer Paul Hervey-Brookes, involving a Bradstone Design initiative for self-builder inspiration. Self-builders can find a whole range of design ideas and inspiration from Paul on the Bradstone website to help make their vision of a contemporary outdoor space a reality.

As with anything, the only constant is change, and Bradstone is keeping its finger firmly on the pulse of attitudes and appetites around garden landscaping design.

Self-builders are always a reliable indicator of where market trends are developing and we'll continue to strive to keep up with them and provide contemporary paving products for their ambitious designs ■

www.bradstone.com

Phase 4 Timber decking: How to get it right

By Christian Jebesen of Kebony

Whilst environmentally friendly construction technology has advanced rapidly over recent years, in part a result of pressure from both consumers and NGOs, the cost of using such technologies in construction can sometimes mean that sustainability features low on the overall design agenda. Adding decking facets to your home can be a stressful, expensive and complex business, before sustainability even comes into consideration. However, with a good selection of materials and the right know-how it is possible to install environmentally friendly, attractive and affordable decking.

Ensure you measure the area carefully – then measure it again

You want to be absolutely sure that you know exactly how much timber you are going to need. It can be frustrating to start a project and run out of wood halfway through. Conversely, you don't want to waste money by over ordering so make sure your measurements are very precise.

Choose the right material

It is important to choose a wood that is as hard as

possible. Softwoods will deteriorate over time or absorb water. Some timber products, like Kebony, have good resistance against fungi, rot and other wood destroying microorganisms as they are structurally resistant at a cellular level. It is also important to pick a timber product with good stability. In the case of Kebony, swelling and shrinkage are reduced by 40-60 per cent as compared with the parent wood. Finally, wood that is free from toxins or harmful impregnation substances, will ultimately be safer as these impregnated substances tend to leak out over time.

Work carefully and thoroughly

If you don't have experience in fixing decking to a building, it is worth undertaking the task with someone who has done it before. The method requires you to fix one joist directly to the masonry and then set out the rest of the sub-frame in line with it. Drilling holes at intervals along the length of this joist, you will insert expanding masonry bolts into each of the holes; these joists will eventually support the deck. As you go, be careful not to block off any air bricks or interfere with the damp-proof course. It is worth taking your time on this and regularly checking your work.

Low maintenance woods are more cost-effective in the long run

A wood that does not require extensive treatment such as varnishing and painting will not only be cheaper in the long run and easier to maintain, but will also perform better. Rather than deteriorating in extreme weather conditions or exposure to heat, light and wear, hardwearing woods will maintain strength and will not decay.

The selection of sustainable materials is of paramount importance to the ensuing sustainability of a building. Treated timber has the ability to bypass the need for maintenance, painting or varnishing, meaning that it is as ergonomically sound as it is environmental and it is therefore unsurprising that it is fast becoming the choice of people across the construction industry. What we can learn from the proliferation of these new technologies and methods is that the future of timber in construction is filled with the potential to incorporate innovative and imaginative ways to meet demands for sustainability in building. Technologies such as Kebony champion new possibilities for wood as a construction material and are a prudent selection for the well-informed self-builder ■

www.kebony.com





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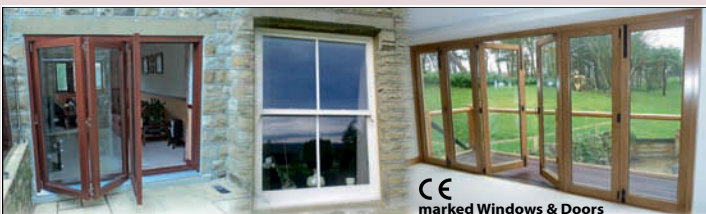


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